THE NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

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DECEMBER.

"With more than Summer's beauty fair,
The trees in Winter's garb are shown;
What a rich halo melts in air
Around their crystal branches thrown!

O God of Nature! with what might
Of beauty showered on all below,
Thy guiding power would lead aright
Earth's wanderer all thy love to know."
—*Andrews Norton.*

DECEMBER; the best of the circle of The Months, and the fruition, the crowning glory of the year! And what a jolly month it is. New England thrift and foresight are apparent all about the premises of the farmer; in the cellar,—sometimes in the garret,—in the kitchen, the corn-house, wood-house and hay-mows. The cattle are gathered in, and are fairly established in their winter quarters. A little habit has taught each one to know his particular crib, so that all come to their places as quietly and regularly as a squad of well-drilled soldiers wheel into line at the word of command. They soon become familiar with their master, recognize his voice, even his *step*, and greet him with earnest *longings*, when the stated hours for feeding arrive. The ox knoweth his owner, and the *cow her* master's crib. The horses neigh and paw the floor, impatient as a child, for the forthcoming food. They have quickened appetites in the keen air, and eat without fear of indigestion and night-mare.

The *sheep* are less orderly, and impatient of restraint, of any kind. They need, therefore, ample room, light and warmth, in which to exercise. In feeding, they are continually changing position, leaving a favorable spot for one not half so good, rushing headlong between two others, or knocking over a weaker one, to get at the fodder which it had just left. This habit indicates that a flock needs three or four times as many lateral feet of space, in feeding, as there are animals in it, in order that they should be quiet, and eat without molesting each other.

Now, bright fires are burning *upon the hearth*, in some favored rooms; the tea kettle sings on the cooking stove in the kitchen; the house cat lies purring in the warm sun, or, if evening has set in, stretches herself in the corner of the sitting-room fireplace, or is coiled up, badger-like, behind the cooking stove in the kitchen! Why does she start so suddenly as though springing at something? Ah! nature is nature, and will have her way, asleep or awake! The cat has entombed some poor

rat or mouse during the day, probably, and is now dreaming of her exploits in catching it, as Goldsmith's Old Soldier,

"Shouldered his crutch and told how fields were won."

Let her sleep. She and the children are on excellent terms, and give place to each other, as regards the cozy niches about the fire.

How delightful the evening temperature, as the family gathers around the lamp, and newspapers and books are opened, the news of the day discussed, and the experiments of Farmer Goit are approved or condemned. This is the gate of knowledge, the foundation and corner stone of improvement and progress. Let us illustrate:

An acquaintance with the principles of *Geology*—even a superficial information of the science, would do several things for the farmer.

1. It would confirm in his mind the truthfulness and wonderful wisdom of the Mosaic account of the formation of this world, and the no less wonderful things which it contains.

2. Because geology investigates the nature, composition, origin, structure, and arrangement of the materials of which the earth is composed.

3. Because the soil we cultivate was once rock, of many kinds, some of them exceedingly valuable to the farmer, while others are of little use as producers of crops.

4. Geology explains what are essential in our soils, so that the farmer understanding this may neglect those lands lacking in fertilizing agent, and improve those which are supplied with them.

For instance: fir and pine trees find a sufficient quantity of alkalies in granite and barren soils in which *oaks will not grow;* and wheat thrive in soils where lime abounds, but not where it is lacking.

All kinds of grasses contain in the outer part of their leaves and stalks, a considerable portion of sand and potash,—in some form,—which gives them strength to stand erect. But in moist meadows this quality is lacking to a considerable degree. Knowing these facts, the farmer would not plant oaks on sandy barrens, nor look for profitable crops of timothy or red top grass on his low meadows.

These simple illustrations are sufficient. Great is the privilege which these *December* evenings afford. Let them be improved until all minds are inspired by the wisdom which may be gained. Turn the attention for a single winter, three times each week to some special topic of instruction, and that mind will soon find itself in a new world of ideas, that will impart substantial comfort and gratification.

December is full of appropriate lessons. It will yield instruction which will prove profitable in preparing the soil and planting in the spring; in the culture of crops in the summer; in the early harvest of hay and grains, and the later ones which close up the labours of the field.

In this inclement season let your charity abound. The poor ye have always with you. So says Holy Writ. Let your sympathies, and *your acts*, go forth into the homely dwellings of the poor, and minister to them as your means will justify.

"Remember the poor, for bleak winds are blowing,
And brightly the frost-pearls are glistening around;
The streamlets have ceased all their musical flowing,
And snow drifts lie scattered all over the ground,
Remember the poor in their comfortless dwellings,
Ill clad and ill-fed and o'er-burdened with care;
Oh, turn not away with a look so repelling—
Thy kindness may save them perhaps from despair."
—*Anonymous.*

THE CLOSE OF THE YEAR.

Every reflecting person will be likely to make this season a halting place in the pathway of life, from which to look back upon the past.

He will summon before him, in the first place, the blessings which attend us in our highly-favored land,—a land, literally flowing with milk and honey, and all food for man and beast; a fine climate, beautiful changes in the seasons, and a land exempt from the terrible convulsions in nature which overthrow kingdoms and decimate the people, in other regions of the world.

He will then call before him his own life for the past twelve months, and bring it to the test of the teachings of the Great Master; will inquire what examples need correcting; what trains of thought require to be changed into purer and more peaceful currents; and what harsh, or unkind language should give place to gentleness of speech, and tones of sympathy and love.

Such a review would be profitable to all. It would tend to establish in the heart the principles of justice, mercy, charity, peace, and set the gates of heaven ajar, so as to give us glimpses of the "mansions" which we are told

by the Savior are "in his Father's house," and which he has gone to "prepare for us."

Then, as we are created to progress in knowledge, as well as in purity, the mind may be turned to secular affairs, and get a deeper insight into the things which pertain to our special vocations, so that we may acquire more power over nature around us. This would not only tend to higher enjoyment, but to an increase of profit in our business, and with that the means of a more extended usefulness to our fellow-beings.

The Months have again rolled round, completing their circle, covering the earth with sustenance and beauty, or coming in grandeur or sublimity, even, and showing the love and power of Him who rules them all.

We are in the enjoyment of civil and religious liberty,—a boon not capable of being expressed by any language that we can command,—of a wonderfully extended and fertile country. The arts and sciences have progressed so as to alleviate an immense amount of human toil that our ancestors were subjected to, and all are left free to choose their own occupation and modes of life, and carve out their fortune, scarcely knowing that a law exists, only in its infraction. There never was a more highly favored people. Let us see that our heritage is kept pure for those who are to succeed us.

For the New England Farmer.

THE POTATO.

It is now more than two centuries since the potato was domesticated and its value somewhat appreciated. Notwithstanding this long lapse of time since it was taken from its wild state in South America and literally *transformed* in its habits and character, it gave no decided indication of suffering from the transformation until the present century, nor even then until within the past thirty or thirty-five years.

True, indeed, is it, that it was subject to ills in common with all other cultivated crops, by reason of unpropitious seasons, or injudicious culture. In the early part of this century, the farmers of England, and to some extent those of Ireland, were troubled with what was there termed the *curl*. Various reasons were given for the appearance of this disease by those who at that time wrote on the subject, but nothing decisive was ever arrived at as the true cause of the trouble. The most satisfactory reasons were the constant planting from the same variety and on the same land, so that potatoes degenerated and at length yielded indifferent crops, and over-manuring with green dung.

I incline to the opinion that in these reasons, then given for the disease called *curl*, we have the secret of the cause of our present potato disease. Our whole process of culture is artificial, and Nature seems to resent the injury inflicted upon her. If we would rid ourselves of what is popularly termed the potato rot,—we must go back to first principles; get the *wild seed* and begin where the first cultivators began, and we may be quite sure that for many years we shall be safe from the ravages of disease. It will be of little use to sow the seed grown from our present diseased stocks. The constitution is bad, and the progeny will surely inherit the evil.

I have tried this, and speak from personal experience. About 1842, I put 140 bushels of sound potatoes into the cellar that were only three years removed from the seed-ball. The whole of them rotted in less than three months.

As at present situated, we must try to conform our practice to the well ascertained conditions of the patient. The potato, just now, is our "sick man" in the vegetable kingdom.

The soil, the quantity put in for seed, the food we give them, and the nursing requisite to insure their well-being, are the important conditions of successful treatment. I believe it is now conceded that heavy wet lands should be avoided, and choice made of good, strong mellow soils that will make a crop of fair yield without manure. I am aware that I lay myself liable to be assailed for this condemnation of manure in cultivating the potato, but I am certain that abundance of facts serve to prove that it has been one of the greatest causes of the disease, by stimulating to an unhealthy degree. I have used various kinds of manure, and none at all, in experiments to test this point, and am satisfied that immunity from the rot is to be found, if at all, in the absence of fertilizers.

I have known large fields of potatoes in one night to turn black and emit in the morning a most disgusting stench,—while in an adjoining lot, planted with the same seed, the crop matured and was marketed sound. On inquiring into the reasons for the condition of these crops, I found that green stable and slaughter-house manure was used on the lot that rotted, and that the healthy field received no manure of any kind. It was pastured in previous years and was in good condition for making a crop.

As to the amount of seed we should use, I think there need be no serious question with those who are familiar with the published reports during the past few months of the results obtained in using *very little* seed in the experiments with the Early Rose and other new varieties. The yield obtained is far beyond the usual average, and in every instance that has come under my notice, but one eye has been used in a hill. If these results are so, what is to be gained by putting in whole or even half potatoes as many do? In 1855 or

1856 I experimented with seed by using large, medium-sized, halves, and pieces with one and two eyes in a hill. These were planted in rows, side by side, in the order in which I have here written them, in a field of four acres. They were weighed and minutes were kept of the result. I have lost the memorandum, but the results are familiar to me and not likely to be forgotten. The uncut potatoes rotted very badly. The large ones produced more than one half rotten ones, while the small cut pieces were exempt from the rot almost entirely,—probably not one bushel on the whole four acres aside from the few rows where I used the large seed in the experiment.

From this result I derived additional evidence of what I had for years regarded as true, that we should use as little seed as possible and secure the germ,—compeling the plant to seek for nourishment *outside* of the parent potato, which contains the fatal poison that has been accumulating in all the years of its unnatural culture. I am not sure but we might after years of culture in this way throw off the disease and restore the plant to health again. I cannot see any practical use in using seed in such large quantities as many do.

I have referred to the results obtained with the Early Rose. I fear that in most, if not all, these reported cases of large returns, they have been purchased at the expense of the health of the potato by over-stimulating with manure. Time will tell how that is. It would be well if some of our farmers of means would year after year institute experiments that would set at rest these ever-recurring questions, about which their seems to be so many conflicting theories. K. O.

Oct. 25th, 1869.

MY EXPERIENCE IN PORK RAISING.

The result of my own experience for several years past has convinced me that the prevailing error in pork raising is in overfeeding. The *hoggish* appetite of the swine "growing with its growth and strengthening with its strength," has met with too ready an acquiescence on the part of his keeper, and has not rewarded at the meat tub the extravagant outlay which has been deemed necessary to satisfy it. Beyond a certain point in feeding swine, no beneficial results are attained; on the contrary, the undue development of the stomach of the animal by producing an unnatural craving for the amount of food adapted to the capacity of the stomach, rather than to the requirements of growth and development, pro duces waste and consequent loss of profit This, briefly stated, is my theory, based upon facts.

Several years since, I began to practice more care in the raising of swine, weighing and measuring all the corn, meal and other feed used in raising a definite number, and noting the exact amount necessary for the largest production of pork. The want of care and attention to this matter will almost invariably, as I presume the most of you readers will admit, carry the expense of raising pork nearly if not quite up to the value of the production.

Year before last, corn was high and pork cheap. In a conversation with some of my neighbors on the question of the profit or loss of making pork during that season, one stating that his pork would cost him fifteen cents per ponud, and another that he could not raise it for less than twenty-five cents, I ventured to make the assertion that with corn at $1.50 per bushel, and pork but ten cents per pound, I would suffer no loss. This was in December. I procured corn and meal at the above named price, and having three swine to fatten, I ascertained their weight at that time, and at the time of killing, which was in the latter part of February following. An exact estimate of the increase in weight showed that I had succeeded within one-half pound of pork of accomplishing the financial feat promised to my doubting neighbors.

My process of feeding is as follows:—I take a spring pig and commence by giving him from a gill to half a pint of raw meal, mixed with a sufficient quantity of milk to wet thoroughly, to which I add about a half a pint of milk three times a day, with a few potatoes boiled. I feed a few potatoes until the pig is about four months old; my object in giving the potatoes being not so much for food as to produce a sufficient development of the stomach. After that, until six months old, I give three pints of raw meal with about four quarts of milk a day, occasionally giving a few potatoes. After that until fattening time, I feed two quarts of meal with four quarts of milk or water per day. During fattening time I feed the swine one quart of meal with one quart of drink three times a day. If water is accessible to the animal at any and all times, it will be found that he will not drink a pint a day in addition to the above named quantity given with the food.

For the past four or five years I have raised and fatted from three to five hogs per year on the above quantity, averaging fifteen pounds of pork to a bushel of corn. It will be seen that I discard swill and house slops as worse than useless, having demonstrated from actual experience that these *sloppy* messes, so conveniently disposed of and so lavishly fed out to the swine, render a larger quantity of more substantial food necessary in fattening time, in order to satisfy the cravings of appetite, without a corresponding increase of pork produced.

My experience has demonstrated, to my own satisfaction at least, that meal fed in a raw state is better than when cooked. I now have a hog one year old the 21st of last June, raised on the above named quantity of food, which now, Sept. 21st, girths five feet, and measures five feet ten inches in length, estimated to

weigh 450 pounds dressed pork. I commenced feeding this swine for fattening, the three quarts of meal per day, on the 5th day of Sept.—*Winslow Arey, Hampden, in Maine Farmer.*

THE HIGH PRICE OF MEAT.

The *Courrier de la Boucherie* of Paris contains an article upon the rising prices of butcher's meat all over Europe, which have attracted serious notice in France. All the French markets have been gradually rising for the past six years; so much so that the advance constitutes a considerable surchage upon the consumption of the country. Choice parts are double the price they were, and inferior joints are fully one-third higher. It was thought that the opening of the new markets at La Villette. Poissy, and Sciana, two years ago, would lower prices in Paris; but the result has been quit the opposite, and the advanceed prices of Paris have been met by corresponding movements at the provincial markets—for instance, at Aix, Bordeaux, Caen, Chartres, Dijon, Lisieux, Nismes, Rouen, Toulon, and Lyons.

It is the same in England, notwithstanding great supplies of cattle from Holland and Belgium and Germany. In Holland and Germany fat cattle have not been so dear for two years as they are now. In Germany beef and mutton have not advanced so much as in France and England, because the consumption of pork is greater; but in Prussia there has been a distinct advance in all descriptions of meat, and in Italy the rise is still making progress.

This review, adds the *Courrier*, will give some idea of the present state of the trade throughout Europe. It establishes the fact that prices are as high as consumers can bear; that any further advance will gravely compromise the trade; and on these grounds breeders are urged, while the French government is recommended, if a most important branch of trade is to be maintained, to encourage breeders in such effort.

SAVE THE CORN FODDER.

We have long been of the opinion that there was not that attention paid to the curing and saving of the cornfodder that its value demanded. Every good farmer must know that cattle eat it greedily through the winter, and if cut and steamed it is as good for them as the best hay and really more milk-producing.

Where is the necessity of allowing it to remain in shocks until the middle or end of November? Corn should not be cut down until the stalks are dying and the grain is pretty hard, and then it should remain no longer in the field than is absolutely necessary for the drying of the grain. It should be husked as early as possible, and the fodder tied up in bundles and either carefully stacked near the cattle stables or put under shelter in sheds.

It is well known, too, that horses prefer it to the best hay; also that the blades are especially sought for to feed racing animals, strengthening their wind and bottom beyond any other food. It is besides wholesome provender and helps most beneficially in making the winter's supply of hay hold out till late in the spring, with the addition of chopped roots, which every farmer, who shrewdly looks to the main chance, ought to cultivate for feeding in the early part of the winter.—*Germantown Telegraph.*

BONY DEPOSITS.—The horse, either from natural predisposition or from the severe exertions he is called upon to perform, is certainly more liable to bony depositions than any other animal. Adapted as he is to carry weight, and travel with speed, his ligaments and sinews are severely tasked and exposed to the consequences of over exertion. Yet, in addition to this, we are disposed to conclude, that in the horse, nature more readily seeks to relieve herself by ossific formations than in the human being. Some horses, too, show a much greater disposition to these depositions than others; the same amount of injury in the one animal will produce them, while in others it will have no such effect.

This predisposition of some horses to become affected with spavins, splints, or ringbones, is a matter of much importance in breeding; for it is no doubt hereditary, and ought to influence, in some degree, the choice of the mare, or the selection of the sire. It must, however, be acknowledged that the shape of the limbs which may predispose horses to become afflicted with these diseases is still more hereditary, and an object, therefore, of still greater importance.—*Prairie Farmer.*

MANURING LAND WITH SOD.—A Herkimer County, N. Y., correspondent of one of our exchanges says that sod is one of the best means of manuring—indeed *the* best generally speaking,—for this sod obtains its wealth mostly from the atmosphere, and needs not be shoveled and carted on the field. It is the means of manuring the land here. It is the successful means—only thoroughly so however, with the use of clover in connection. Farms in this county have improved wonderfully. The land is better, and in many places much better, than the original soil was. And yet it has been cropped for near a century, the last 20 to 30 years being employed in graining and raising clover—raising it for seed to a large extent, so much so that the Herkimer county seed, was as noted as its cheese now is. Since the dairying era commenced, the land has been improving, and all

along it has been paying better than raising grain; and this with less labor. Sod has done it.

NEW PUBLICATIONS.

Pear Culture for Profit. By P. T. Quinn, Practical Horticulturist. New York: Tribune Association. 1869. 72 pages.

Mr. Quinn's long experience as foreman and manager of the Prof. Mapes' nurseries and orchard has afforded him rare opportunities for familiarity with practical pear culture. The small number of varieties that he finds profitable will strike the attention of every reader of his book. Having lost thousands of dollars in attempting to cultivate some fifty varieties, he finds only some half a dozen profitable on pear stocks, and a single one on quince. On pear stocks he prefers Bartlett and Doyenne Boussock, for early; Clairgeau and Seckel for autumn; and Anjou, Lawrence and Winkfield for winter. For dwarfs the Duchesse d'Angouleme. His remarks and cautions on choice of aspect and varieties, preparation of soil, planting, pruning, gathering, marketing, &c., will be valuable to all who cultivate pears for profit. When reading any book, we like to feel that the author understands his subject, but we dislike to have him remind us of the fact too often in express terms. We think, that a smaller volume might have contained all he wished to say, and that an alphabetical index of subjects of two pages, would have been worth more to the *practical* reader than the twenty pages of introduction, preface, and inconvenient if not useless table of contents. The cuts, too, are clumsy and coarse.

Nebraska.—For the purpose of correcting the impression made upon the minds of those who studied geography in books and atlases which represented that section as the "Great American Desert," the Omaha *Agriculturist* has obtained a statement from ten dealers in and manufacturers of agricultural implements and machines, of the number sold by them in that town since the commencement of the present year. From these statements we find that the number of ploughs sold up to October has been 3455, reapers and mowers 804, horse rakes 510, wagons 706, threshing machines 52, seed sowers 198, and other things in proportion. The sale of so large a number of implements and machines in a single town, in about six months, is a pretty good indication that the farmers of this young State are doing something to make the "Desert" "blossom as the rose."

Patent Grape Growing.—In reply to a correspondent who asks if there is any patent on any particular way of growing grape vines from short cuttings, the *Prairie Farmer* says, a patent was issued to William Griffith, North East, Pa., May 14, 1867, for propagating grape vines from single buds in the open field. This patent covers the mode of propagating grape vines in open field culture, by covering single bud cuttings with a cold mulch, applied in sufficient depth to keep down the temperature of the bud, and thereby retard its sprouting until the roots have been adequately developed.

AGRICULTURAL ITEMS.

—The estimated stock of domestic wool in Boston is 11,100,000 pounds; in New York, 3,400,000 pounds; and in Philadelphia, 4,300,000 pounds.

—A correspondent of the *Rural New Yorker* finds that peeling willows in June, or whenever the bark will slip, and letting them stand till the next season, is sure death to stem and root.

—A correspondent of the Farmer, at Groton, N. H., writing October 4, says that the corn crop is much better than was expected during the summer; potatoes are first-rate in quantity and quality, with but little rot; apples, especially grafted fruit, almost a failure.

—The asparagus growers at Oyster Bay, L. I., find that, by dusting the plants attacked by the larvæ of the asparagus beetle with lime, they can effectually destroy it. It does not affect the beetle itself, which is quite lively and readily jumps away if annoyed by anything, but the larvæ being very thin-skinned, it appears to burn them or dry them up as soon as it touches them. By frequently going over the beds, its ravages may be completely arrested.

—A correspondent of the *Rural World*, who has lived on the Channel Islands twenty years, and raised cattle there, says that when these Channel Island cows are removed, though they may be good milk and butter producers, he does not believe that they will, anywhere else produce as they do in their native place. He believes the peculiar climate, which allows grass to remain green *all the year*; the careful and regular way in which cows are feed there; and the warm stabling and constant attention which they receive—make them produce more and richer milk than they ever can elsewhere.

—At a recent discussion by the Lexington, Ky., Farmer's Club of the best method of harvesting corn, Mr. John Webb said that in his opinion the best way is to cut it up when thoroughly ripe; because, first, the fodder is much better when dry, and second, the corn is more healthy when fully matured for man and beast. When it is cut green, experience proves that corn is certain to cause colic in the animals using it; green fodder is always unpalatable to stock, and it is especially so when damp. At one time in his life he believed in the value of green fodder, and has hurried out at daylight with his hands to secure it before it became dry, but he is satisfied now, from his own observation and that of other farmers, that dry fodder is eaten with more avidity than green, and cattle look better from using it.

For the New England Farmer.

THE GARDEN IN DECEMBER.

It is an axiom with all prudent rulers and governments, "In time of peace prepare for war." As thoughtful gardeners we will adopt the spirit of this motto, and say, "In time of leisure prepare for the busy season." The gardener who drops his implements at the first approach of hard frosts and gives his garden no more attention till the opening of another season, always finds himself behind hand in more respects than one. There is always work that is in order; seed time and harvest bring their appropriate duties, and so does the season of comparative leisure! While there may be but little labor for the hands, there is more opportunity for the exercise of the mind. Thought, reflection, and planning contribute largely towards success in any calling, and a leisure season is the most favorable time for this occupation.

Sometimes there is an "open spell" of weather in December, favorable for out-door work, when improvements, &c., may be made; cleaning up, pruning, draining, ploughing, spading, &c., may be done. Turning up the soil at this season, often brings to the surface a large number of insects and their chrysalids, &c., which the weather will destroy, or the birds and fowls pick up and devour. If heavy snows or rains and ice come and adhere to trees, shrubs, or vines, attention is needed, that damage does not occur from overloading, breaking or splitting down of the trees and branches, by gently shaking off the snow or ice. The fences, gates, &c., will need to be looked after, to see that they are in good order, and kept shut, to keep out farmer "Slack's" or neighbor "Don't Care's" cattle, as they range the highways or fields.

Our hints for the practical, every-day operations during the winter season must be brief.

Cold Frames —In a late article in the Farmer, on "Cold Frames and their uses," there was an error in saying "sow seed of cabbage and cauliflower the last of *September*." I had in mind to say the last of *August*, and find by referring to my notes, that such was the time. The error must have occurred in writing out the article. In this latitude the first week in September is late enough in general seasons; sown then, the plants will have attained a growth of two to four inches upon the approach of cold weather, when they are transplanted into the cold frames, the plants set deep, putting the whole length of the stem, up to the leaves, into the soil, so that the stem may be protected, as it is the most tender part of the plant, and is first affected by cold. The main point in the successful wintering of plants in cold frames, is to give proper ventilation,—all that is possible without exposing the plants to too great cold. Attention is needed to see that mice do not gain admittance and so destroy the plants. Trap or poison them, and keep them out at all events. See that the frames are well banked up on all sides, and provide mats or shutters convenient to be used in severe weather. The novice in the use of cold frames may meet with some drawbacks or failures at first, in which case he should not be discouraged, but draw lessons so as to avoid shoals and quicksands in the future.

Compost.—All good gardeners look out in advance for liberal supplies of compost and manure, and the winter is the great season for accumulation. Muck or dried earth should be provided in abundance, to absorb all the liquids, &c., from the privy, pig sty, stable, and to mix with the droppings of the poultry. Muck or woods earth mould may be dug and hauled frequently, at any time during winter, and often easier or more conveniently on the sled than on the cart or wagon. No danger of hauling or getting together too much, as it will keep and be all the better for keeping.

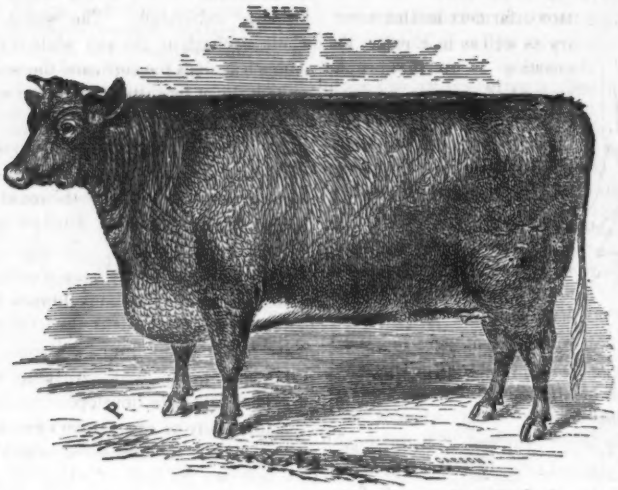
Seeds.—Take *good* care of all home produced. Select the best only, and clean out all others. Make a list of what is wanted, and if you cannot obtain pure and good of your friends, be in readiness to order from reliable producers and dealers as soon as their stocks are offered. W. H. White.

South Windsor, Conn., 1869.

THE SOUTHERN SCORPION.

The Scorpion is frequently found in Georgia, yet it is not abundant. It is a little venomous reptile, about an inch and a half to two inches in length, of a brown color, and in general appearance somewhat resembling a small crayfish, except the tail, which, instead of being flat, is armed with a horny spear and within which is a very sharp poisonous sting which can be used at will. The tail is curved over on its back, in the form of a hook. The sting or wound it inflicts is very poisonous and painful, although I have never known it to prove fatal. As their abode is generally under rotten logs, persons engaged in clearing new land are sometimes stung in the hand by them; the hand and arm swell up rapidly and become much inflamed, and the victim is laid up for two or three weeks and then slowly recovers.

Its habits are the most interesting part, however. The female, after being impregnated by the male, *falls to and eats him up*; she then lays five or six eggs and fastens them upon her own back, where they are hatched; she then turns her tail over her back and *stings all to death that she can reach*; a portion of the brood, however, usually escapes; those that are killed the mother devours when they fall off. The young that escape death, as they increase in strength and age begin to *devour the mother*, by eating into her back and vitals and finally kill her.—*Georgia correspondent Germantown Telegraph.*



A DURHAM HEIFER OF A BEEF FAMILY.

Whatever may be the final decision of farmers as to the claims of the breeders of the milking families of the Durhams or Short-horns as to their excellence for the dairy, there can be no doubt as to the popularity of the beef producing families. Our Cattle Shows and our city live stock markets furnish ample proof that they are popular with feeders East and West, but more especially perhaps at the West and Southwest.

A very fine illustration of the characteristics of the milking family of this race of cattle was given in the Weekly Farmer of March 27th, and in the Monthly at page 237.

The cut which we give this week is the portrait of a two-year-old heifer, of the beef producing Short-horns, and it well illustrates the wonderful fullness in every part of the carcass that distinguishes the pure bred animal of this class, making it valuable all over, even where most other breeds fail, and with no more offal than in a creature of a third less size of an inferior breed.

A comparison of these two illustrations, as representatives of the two families of Short-horns,—the one bred for the dairy, and the other for the butcher,—will prove interesting to those of our readers who are inquiring into these matters.

Most feeders desire a quick return for capital and food, and the animal which gives it in the shortest time is generally preferred. The flesh of the Devon and of some others may be of finer grain and of tenderer quality, but for early maturity, weight of meat, ripeness of points, and fullness in choice places, superiority is claimed for the beef families of the Durhams. Our cut, which is a specimen of good engraving, is copied from Allen's American Cattle.

To Break a Horse of Pulling at the Halter.—Procure a small rope, (about three-fourth inch is best, although a strong bed-cord will answer,) put the middle of the rope under the horse's tail, as one would the crupper, cross the ropes on the back, bring the ends forward and tie so as to form the lower part of a breast collar. To hitch, put the halter-strap down through the ring, and tie to the rope collar.—*Rural New Yorker.*

Planting the Chestnut.—In this region they may be planted as soon as they fall from the tree, while the shell is yet moist; or they can be put at once into rather moist sand, until the middle of November, or until March. We prefer the autumnal planting, immediately after the chestnut falls from the burr. It is a rapid grower, and with proper pruning it can be formed into a beautiful tree.—*Germantown Telegraph.*

WHEAT CULTURE.

MONG farmers in this country as well as in Europe, the question as to the proper amount of seed to be used in the cultivation of grain has of late received considerable attention. We have long been convinced that in raising wheat too much seed to the acre is used, and have said that wheat should be *planted* not *sowed*. If this is done at the proper time, winter wheat may be raised with as much certainty as spring wheat; indeed, we think with more certainty, and every one knows that winter wheat, when it succeeds, yields a larger crop and of better quality. Let it be planted as early as it can be without danger of the seed stalk starting before the frost, and the plant will become well rooted, and unless the water stands upon the surface it will not suffer from the winter.

We are inclined to believe that wheat put into the ground from two to four inches deep, in rows sixteen or eighteen inches apart, with the grains not less than six inches apart in the row, would yield, with proper cultivation afterward, double the number of bushels usually obtained per acre.

Why should wheat unlike other crops deteriorate both in quantity and weight, as it is well known that it does? Corn is not only kept up to its full standard, but constantly improved, by selecting the best grains for seed, and giving it clean culture and allowing each plant sufficient space in which to spread its roots and find nourishment. Now corn sown broadcast and so thick that it would shade the ground and thus keep down the growth of weeds, and the corn for seed taken from the average product of the field, how long before it would depreciate as much as the wheat crop has done?

The idea that wheat must grow so thick as to shade the ground in the spring, and thus favor the catch of grass seed which we usually sow with it, or so thick as to smother the weeds in the rich but poorly cultivated soils of the West, is we believe all wrong. We ask why grass seed should be sown at all with wheat? It can be sown to better advantage after the wheat is harvested, if the wheat has been properly cultivated. The wheat needs the whole strength of the soil while it is growing, as much as does the corn, and the weeds should be kept down by cultivation in the wheat field, as well as in the corn field.

The editor of the *Prairie Farmer* in discoursing upon this subject makes some very sensible remarks, which we would commend to the consideration of Eastern as well as Western wheat growers. He says: "If wheat is sown thick enough to keep weeds down it is sown thick enough to keep down a large number of spires that would grow and produce seeds, 'some an hundred fold, some sixty fold and some thirty fold', if there was room enough for them to develop.

"How many of our farmers are aware how near together the grains of wheat lie when they sow two bushels of wheat to the acre? and yet some sow heavier than that. One peck to the acre will put four grains on every square foot of the land, and it is highly probable that these are more than would grow to the best advantage. The truth is that very few of us have ever seen the product of a single grain of wheat that was growing to the best advantage in regard to space and cultivation. One grain of wheat in soil free from weeds and kept mellow as we do the soil around some vegetables would show a product as different from what we see in an ordinary broadcast wheat field as the solitary mountain oak differs from the puny sapling in the shady forest.

"One of the best yields of wheat that we have heard of this season, is that of Dr. James S. Hamilton, of Athens, Georgia. This crop has forty-six bushels to the acre. We have not seen it stated how much seed was sown, but from the fact that it was drilled eighteen inches apart, we conclude that but little seed was used.

"The experiment of Alderman Mechi, of London, showed the astonishing yield of forty-eight bushels, and two bushels of screenings, to the acre, on land on which less than a peck of seed was sown, or rather planted. This wheat weighed sixty-six pounds to the bushel.

"When the time comes that we plant, hoe and cultivate wheat, a part of the extra expense of tending it will be defrayed by the saving of seed, from the difference of the

two bushels or more which many now use, and the peck that will be spread over the same ground."

SEED WHEAT.

An anecdote is told of a former Emperor of China, to the effect that walking by the side of a wheat field, he saw a stalk of wheat much larger and riper than the rest of the field, and that he plucked it and saved the grains to be sowed, and from it derived a variety of wheat much earlier and more prolific than the wheat in common use, and thus conferred a great benefit upon his people. When wheat is sown in drills, we can easily pass through the field and cut into a basket the heads that are the plumpest and first ripe, and beat out the grains for seed. In a day's time a careful man might thus collect several pecks of seed wheat, that would be as much better than the average of the field as the ears of corn that we select for seed are better than the average corn of the corn crop When we come to sow with the drill, only about a peck to the acre, this will not be so great a job as it would now seem, when we sow two bushels to the acre. The next best course would be probably to use the Separator of Mr. Sanford Adams, or some other Yankee invention, which will retain only the largest and plumpest grains to be used for seed, and let through all the small grains and foul seeds.

For the New England Farmer.

GRAPE-GROWING IN NEW ENGLAND.

To persons who are fond of growing fruit, grape culture is very fascinating; and the manner in which some persons who were interested in the sale of vines described grapes,—their appearance, qualities, uses and culture,—was so interesting, that like a well written novel their recorded opinions and statements could never be fully appreciated without digesting them in a way which often proves that "reality is stranger than fiction," and far more instructive.

My articles on "Grape Fever" in the FARMER for March, 1857, were intended to help those who at that time were in danger of catching the fever; and had I not feared that, being myself a dealer in vines, I might be suspected of having other motives, I should, at your repeated request, have said more about grape growing in New England.

The years of drought, previous to the time above mentioned, enabled experienced persons to ripen in our neighborhood some Iona, Israella and other valuable varieties, which hereabout can never be ripened fit to eat except in rare seasons and under unusually favorable conditions, and then at a cost four times the value of the fruit. Who, in the last three years, has heard of our most experienced amateurs ripening Iona, Israella, Adirondack, Rebecca and Allen's Hybrid? Why is it, that in the agricultural and horticultural papers we now see so few advertisements of the above named vines and many others, including most of Rogers' Hybrids.

The truth which experience teaches in regard to out-door culture of the above named varieties is, that when they can be ripened they are, in the opinion of those we regard as good judges, excellent in appearance and flavor, but to ripen them at a cost that will give a profit is the impossible thing I am writing about.

We have second-rate grapes which in suitable soil and location, and under ordinary culture, will come to that condition of ripeness which will make them preferable to the first-rate ones for the table, if both are grown under the same conditions in our State or in any place north of Boston. I became so well satisfied of this, that for two years past I have been careful to say so to persons when engaged in selling vines to them, and when conversing with visitors on the merits of each variety they may have been interested in. Some who could afford it, concluded to experiment for themselves, and the result was that like myself they concluded that wit when bought by experience is often valuable; others continue to experiment and complain in a way that children sometimes will, when they are repeatedly foiled in endeavoring to accomplish things which the laws of nature are opposed to.

I wish not to discourage the growing of grapes, improved varieties I mean. I wish all men to share with me any luxury nature furnishes for man's good, and as grapes when fully ripe are pleasant to the taste and refreshing to the eater of them, all who cannot afford to buy them, but who have a rod of land on which the sun shines, should grow them; for on even such a small space I sometimes grow full one hundred pounds of fruit, that most persons would relish and greatly enjoy the use of as refreshing food and drink.

I am aware that many say grapes are an expensive and an uncertain crop to grow. I answer, by no means is either correct in any sense that may not be applied to other fruits. The loss sustained in grape culture in the northern States can be traced to inexperience, or want of a broader experience, which would have suggested a change of variety of vine cultivated, instead of continuing to grow those "run out;" just as our farmers change their corn and other seeds; so those who have failed in the older grape-growing States should have

planted new varieties and selected those that suited the location. It will be said that this has been done without success, which I admit; but, I also say, that in the same sense and to as great an extent, they have generally succeeded, equally with the farmer who changes his corn and other seeds; in proof of which, note the astounding increase of quantity sent to all large cities, and the steady increase of the same.

I have increased, in ten years, my stock of bearing vines from one vine to seven hundred, and stop only because I have no more suitable land for them. I do not expect they will make me rich in the generally accepted sense of that word, but they pay me to grow them on land that will sell for high prices, and where hired labor costs from two dollars to two and a quarter per day. In a future paper I may say what varieties I have grown, how I grow them, and what has been my measure of success. JOHN FLEMING.

Sherborn, Mass., Oct. 4, 1869.

For the New England Farmer.

HOW THE CALF IS BEING RAISED.

I am raising a calf which is now about seven weeks old. The calf was born July 16th. I bought it when five days old. I learned it to drink new milk in two days; I then substituted skim milk so rapidly that in two days more I gave it no new milk at all; and in a week from the time of purchase its drink was about half skim milk and half hay tea. I was very particular from the first to encourage it to eat hay. Experience teaches me that calves prefer early cut, *last year's hay*, to anything newer. They will eat very little green grass when they can get that, and it seems to be just what they need to keep the bowels in a healthy state. There is more danger of a calf coming to harm from scouring than from any other cause. At sixteen days old, it would eat hay and chew the cud like an old cow. When I began cutting fodder corn, about the 8th of August, the calf being three weeks old, I pulled off and gave it the green leaves, of which it would eat sparingly. At the age of six weeks I took it out doors for the first time, and since then have tied it out four hours per day, in the thin shade of a dying tree.

Meanwhile plenty of loam, housed when dry for the purpose, has been kept under the calf; and I consider the manure thus made has nearly or quite paid me for all time and labor expended up to the present time. I have given no meal or grain of any kind; the milk, hay tea, and hay and corn fodder, being its only food. I occasionally give it fresh loam from out doors to eat. I litter it nights, and calculate to keep it in a comfortable condition. My neighbors say that the calf is a large, fine animal, with every prospect of making a good cow, especially for butter; and several have said it was the fattest calf they ever saw!

From what I have seen, I think Dr. Hartwell has not given full credit to hay tea as food for young stock. I think, in raising a calf, the first object, (after it has sucked three or four times,) is to learn to drink well. For this purpose new milk is most convenient. Then, just as quickly as possible, substitute skim milk; then, if that is scarce, learn it as rapidly as possible to drink hay tea, in greater or less quantities.

In Secretary Flint's Fourteenth (Massachusetts) Report, at pages 37 and 38, there is a statement of Hon. Simon Brown, (Ed. FARMER) that he has raised fine thrifty calves with hay tea *alone*, after they were four or five weeks old,—the hay tea being largely mixed with the skim milk at first.

In raising young stock, especially if they come late, great care should be used in feeding, bedding and sheltering these babies of the barn, especially in winter, to keep them thrifty, and prevent their getting stunted. Meanwhile, there may (may there not?) be such a thing as forcing a calf too much. A neighbor of mine raised a cow several years ago, I cannot give the exact details, but it sucked a long time, grew fast, and had a calf at fourteen months old; but as a *cow* she proved of value only for beef.

There are many ways of raising stock, and no one exact rule will always suffice in full. "What is food for one man, is poison for another," and it is in a measure so with calves. Different breeds need different management, and so do different individuals of the same breed. The Jersey is tender. The Devon is hardy. Consequently a greater degree of care is necessary in raising Jersey, than in raising Devon cattle.

But one thing is plain, the too frequent habit of tying out young stock in high grass, without shade, and giving no dry hay, is next to ruinous. Another important item is to feed warm drink to the calf. It is a great preventive of scouring. *And more than half the trouble in learning a calf to drink, usually results from giving the drink too cold.* Please to note that! While I believe that skim milk and hay tea make the best food for calves, it is but fair to state the fact that very fine animals are raised by other methods. A neighbor of mine, having no cow, purchased a two days old calf, and brought it up on oat meal gruel, and his success was such that it would be hard to convince him that oat meal is not the best food for growing calves. I think, however, that when such food is given to young stock, larger quantities are required to keep the animal up to a given standard when matured, than when the food has been of a lighter nature.

The time I commence feeding calves with meal, is when cold weather begins in earnest. Then they need it. Begin with very small

quantities, and, as Dr. Hartwell says, don't give more than the equivalent of a pint of corn meal a day, when a year old. Oats and shorts contain large quantities of bone-making material, and are probably the best grains for growing stock. There is no chewing bones by animals of any age thus fed. Still, where the calf is inclined to grow large and bony, and lacking in plumpness, corn meal may be substituted in a limited degree.

Clover is probably better than any other one kind of hay for calves or milch cows, but all need a change. Rowen of any kind is excellent, also corn fodder. A little bog hay will occasionally be eaten with avidity in preference to any other, for a change, especially if the animal thinks it is stealing it. Nothing is so good as a daily feeding of some kind of roots. I do not think a calf is really fitted to eat much green food until it is from four to seven months old, the time varying with different animals. It is also proper to commence gradually. A calf born in April or June may be let out into a dry pasture in September or October, the grass not then being in a state to scour the animal, as in previous months.

Meanwhile, as cattle are comparatively scarce and high, all the good stock, and none other, should be raised.

A poor farmer without capital to expend in fine stock can often work into it by buying young calves from good stock, and taking pains with them. A poor man of my acquaintance has a cow for which a rich manufacturer has made a standing offer of $150. He bought it when a small calf, and raised it by hand.

Where milk cannot be had or spared, or is considered, as is often the case with milk sellers, too valuable to raise calves on, the oat meal gruel and hay tea may be resorted to; and the calves, as in Mr. Brown's case, be raised on hay tea wholly, after five weeks old. Always study the comfort of the animal. The man who ties his calf out in the hot sun, and among the tall grass, ought to be tied out likewise, and fed on green apples. A good bed and warm stall in winter, save food, and increase the growth and value of animals. "Boards and nails," shingles and battens, are often substitutes for food, and a proper distribution of hay in the mow often keeps the wind out of a loose barn. Dry loam, should be stored, and used beneath the litter in winter, both for the comfort of the animal and for the saving of manure.

In addition, I would say a word in regard to absorbents. It seems to be usually considered that the only benefit in using absorbents for the manufacture of manure is in the saving of the liquid. It is evident however, that the dissolving power of urine and of green dung renders much crude inorganic matter, of which absorbents are usually composed, fit for plant food; while the gases from the manure penetrate through the mass and become fixed and ready for plant food.

Franklin, Mass., Sept. 5, 1869. John.

PAMPERED STOCK.

It is certainly to be regretted, that when the prospect for the general diffusion of the blood of so valuable a race of domestic animals as the Short-horn cattle seems so encouraging, there should be any of the breeders of these noble animals practicing such a system of feeding and management as cannot fail to have injurious effects upon the breed. High feeding, pampering and "training" for exhibition and sale, are not only calculated and intended to deceive and impose upon the public, but tend also, as every intelligent breeder knows, to impair the health, the constitutional vigor, and all the useful qualities of our herds.

Cattle are wanted for use, and not as mere ornaments; and therefore the best are those which make the largest return in *good* flesh and milk for the food consumed and the care bestowed upon them. Of course we cannot expect an animal to be successful under such a test as this, that has not a sound constitution, with such substance of bone and lean flesh as plenty of good grazing, with the exercise it will afford, alone can produce.

To confine cattle in stalls from calf-hood, and feed them with oil meal and similar fat-producing substances; to cover with blankets and rub and curry as horses are trained for the race, except that the sweating and exercise are omitted, will undoubtedly cover almost any animal with fat, give a fine gloss to the hair, and therefore, to an unpracticed hand, convey the idea of superior handling. The flesh will be soft, the hide yielding and flabby; whereas if the same amount of flesh had been laid on with ordinary feeding and grazing, with proper exercise, the flesh would feel firm and solid, though the skin would not have a harsh touch. When will our judges learn that a thin and flabby hide is objectionable, as is also soft and spongy flesh, when the animal is ripe-fat? There is scarcely a butcher in America so ignorant as not to know this.

It is a well-known fact that up to the period of 1839 or 1840, the majority of Short-horns were kept only for grazing and dairy purposes, and were treated with only such feeding and care as the ordinary stock of good farmers had. If we may be permitted to express the hope that the Durhams of our day are equal to those of that period, it is very certain that we have no evidence on which to ground the assertion that they are any better.

While, therefore, the pampering and training, so common in our day, have, in many instances, very decidedly impaired the constitution, the milking, grazing and other useful qualities, all intelligent men know that the practice has not even improved the style and appearance of the stock. While fat and in

training, they have indeed looked sleek and smooth, and their soft and flabby handling has passed with inexperienced men for quality; but when put on ordinary keeping and used for the common purposes of producing milk or beef, they have sadly disappointed the expectations of those who purchased them in the show condition.

I do not object to keeping stock in good order. Cattle should have plenty of the best pasture in the grazing season, and of the best hay or its equivalent in winter, with some meal or grain to the calves and cows in milk. Nor is a moderate allowance of grain to all the stock in winter objectionable; and where corn is not too dear, is probably not more expensive than to feed hay alone. What I object to is the unnatural method, already stated, of so much housing and over-feeding with oil cake, large quantities of milk, &c., so that breeding animals, old and young, are kept just as fat as all this care and stuffing will make them; and that, not with honest, solid flesh of well marbled (lean and fat,) as good beef ought to be, but of the soft and greasy sort, tha will produce the fashionable touch. —*Hon. T. C. Jones, in Ohio Farmer.*

AGRICULTURAL ITEMS.

—It is stated that the Percheron horses, introduced into Central Ohio within the last few years, are giving good satisfaction, and are being bred more extensively this year than at any previous one.

—Mr. J. Harris says in the *Agriculturist* that he does not know how he could get along without petroleum. He keeps the wood work of his farm tools and implements saturated with it, to keep the rain, sun and air from swelling and shrinking and ruining them.

—William Egger, of Lowville, N. Y., a Swiss dairyman, says in the *Rural New Yorker* that cows should be salted every morning, and if in the stable, before foddering, but never after taking water. This is the practice of the best stock-keepers in Switzerland, and he thinks much preferable to salting them once or twice a week, or to keeping it constantly within their reach.

—For a remedy for splints and spavins, D. P. Hawes, Woodville, Iowa, says in the *Rural New Yorker*, "Put into a large-mouthed bottle six ounces oil of origanum; two ounces gum camphor; two ounces mercurial ointment; one ounce tincture of iodine. Melt by putting the bottle into cold water, and heat the water after the bottle is put in it. Apply twice, daily, on splints; three times, daily, on spavins, for four or five days.

—In one of his letters from the West, "Carlton" says, "I would not make the farmers of New England discontented. I would not advise everybody to put up their farms at auction. I would not advise any well-to-do farmer of Massachusetts or Vermont to leave his old home and rush out here without first coming to survey the country; but if I were a young man measuring off tape and ribbon, or selling stays and buttons to simpering young ladies in a city store, I would give such a jump over the counter that my feet would touch ground in the center of a great prairie!"

—A correspondent of the *Rural New Yorker* gives the following as his plan of curing sowed corn. I cut my corn with a stout cradle, when it stands up, or with a corn-cutter when lodged; allow it to lay on the swath a day or two, then rake up and bind the same as oats and rye. I then take an ordinary fence stake, drive it firmly in the ground, set three bundles of corn around it, and tie them; then seven to ten more around these (according to size,) and bind them at the top, with one or two bands; I then cap the whole with two bundles. When put up in this way, they will stand till thoroughly cured, when they can be stacked or put in the barn the same as corn stalks.

EXTRACTS AND REPLIES.

CEMENT WATER PIPE.

I would like to make some inquiry about cement water pipes. Are they liked by those who have tried them? What proportion of sand and gravel is used, say to a barrel of cement?

DANIEL T. PIERCE.

Prescott, Mass., Sept. 27, 1869.

REMARKS.—Properly made cement water pipe we believe gives good satisfaction, but if poorly made it is very unsatisfactory. Mr. L. M. Hill, of Amherst, in your county, has nearly 200 rods laid by Mr. Benjamin Livermore, of Hartland, Vt., who has had much experience in the business, and has we believe invented and patented some process by which the construction of the pipe is much facilitated. Mr. Hill would probably answer any inquiry you wish to make. Our impression is that some six to eight parts of sand are used to one of cement, in ordinary work. But we know nothing of the proportions used in making water-pipe. We understand, however, that much of the cement in the market is totally unfit for that use, —does not work or "set" right,—and that of the same lot, one barrel will be good and the next worthless, while to the unpracticed eye both appear alike.

CHESS TURNING TO WHEAT!

Having read the communication signed "E," from Thetford, Vt., in your issue of October 2d, I was reminded of a similar occurrence that happened in Tunbridge, Vt., not more than thirty or forty miles from the place where this wonderful transmutation occurred, and have thought that a repetition of it might be serviceable in the solution and proper understanding of some of the wonders, not to say miracles, of these latter days. Now, I am, like your correspondent "E.," an unbeliever in these alleged changes of wheat to a class and species of plant so widely different from wheat as is chess. But to the story of our eye witness: "A quantity of ground was sowed to

wheat in the fall, which grew and looked well; very little of it winter killed. But when it came to head out it was all found to be chess. A small portion of it was saved for seed, and the rest hayed and put in the barn, affording an immense crop. And at the proper time the seed saved from a portion of the field was sowed, and cared for the same as is usual for grain crops." And now, mark you, for here comes another wonder, and one which so far as I can see to the contrary is perfectly consistent with this whole theory of transmutation, if not with degeneration. "The crop grew well, stood well in the spring, and a good crop of *wheat was grown*, where nought but chess was sown."

Now, Mr. Editor, I know the man well who tells this for truth, and he is considered a truthful man. And he evidently believes it. Now I would like to have some of these believers in transmutation and degeneration explain this freak of nature.

North Hatfield, Mass., Oct., 1869. OBSERVER.

FEEDING MEAL TO COWS AND PIGS.

I feed my milch cows with a mixture of corn meal and shorts, about two quarts and a half each per day. When work is not driving I give it with cut feed. In the busy season I mix it, (half at night and half in morning,) in a pail of water at each feeding. This I consider the most convenient way, as it takes very little time to mix it or for the animal to drink it. I make butter, and I would like to ask if there is any objection to this way of feeding the meal in water?

Is there any other way by which the meal could be fed to produce a greater value of milk and butter, or of beef? Of late, many teamsters argue that horses should have their meal dry. Some hog fatteners say that swine will thrive better on uncooked than on cooked food. These are questions of importance to the farmer, and should be thoroughly discussed. J. W. SNOW.

Cumberland, R. I., 1869.

SULPHUR FOR LICE ON CATTLE.

I notice very often the inquiry in the FARMER, How shall we kill the lice on our cattle? I have tried almost all the panaceas I have seen recommended. Some of them have proved beneficial, while others—kerosene oil for instance—were worse than the disease. I have settled upon the following, which has proved entirely satisfactory with me. Fill the hair full of sulphur, rubbing it in thoroughly with the hand; and give the animal a little internally, with its meal or salt. Two or three applications have always effected a cure.

THE CROW QUESTION.

I rank the crow among my worst enemies. Last year by putting up lines, &c., I kept them at a proper distance from my corn field through the spring; but after my corn was put into the stook, they came down upon it like the plagues of old, destroying from one-fourth to one-third of my crop. I have never had any peculiar affection for the birds since.

PHOSPHATES AND PLASTER.

I am experimenting considerably this season with phosphate and plaster, and will give you the result at some future time. J. L. FRYE.

South Danville, Vt., 1869.

NORWAY OATS AND GOLDEN-SHEAF WHEAT.

I notice large stories about the "Norway oats." My experience with them is not as favorable. I obtained one quart of seed of Mr. Ramsdell, and sowed on fair quality of land, but rather late, and the yield was *two quarts* of poor looking oats. Disposed to give them another trial, I sowed the two quarts on four rods of land that would give sixty bushels of corn to the acre this year, by the side of one quart of Excelsior oats from the patent office, on same surface of land, with the following results: *Norway* yielded one and one-half bushels of thirty-two pounds, while the Excelsior yield was two bushels of thirty-six pounds by actual weight, and of much better appearance. Enclosed is a sample of our Golden Sheaf Spring Wheat, yielding twenty bushels from one and one half sowed on three-fourths of an acre of land, and in a location where our neighbors predicted that no wheat could be raised. R. BURNHAM & SON.

South Strafford, Vt., Oct. 4, 1869.

THE BORER.

I have found an effectual remedy for the destruction of the egg of the Apple Tree Borer. After the deposit of the eggs of the borer, which will be in September, make a wash of one pound of tobacco, and one pound of sal soda, put into two gallons of hot water; let it stand for thirty minutes, stirring it frequently. Then take a rag and rub the body of the trees—the lower part especially—with this wash and the work is done.

This is a good wash, also, for removing lice from the limbs. I have had several young trees destroyed by the pests, but by using the above wash I have no trouble. G. L. RANDALL.

Riverside, Me., Oct. 1, 1869.

COW SUDDENLY DRIED UP.

The inquiry of "E. W. K." reminds me of a case that once came under my observation. A fine cow was changed from a poor to a rich pasture, but instead of giving more milk she gave less and less at each milking, much to the surprise of her owner. By accident it was discovered that a yearling steer had relieved her of her milk, and thus the sudden diminution was accounted for. I have heard of pigs doing the same for a cow, while lying down. Perhaps "E. W. K." will discover some such cause for the decrease in the flow of the milk of his cow. A READER.

COMMON OAT.

I am a hired man and work for one that takes the FARMER. We have counted the produce from a stool that grew from a single seed of the common oat, on a piece of green sward on the farm of W. Hanson. There were fifteen stalks, yielding from 60 to 272 kernels each; the whole amounting to 2793. JAMES W. TAYLOR.

Williamstown, Vt., Sept. 28, 1869.

SPREADING CLAY ON SANDY LAND.

What is to be done with a field which has been ploughed so deeply that several inches of sand have been brought up to the surface? I have tried the experiment, many times, of spreading a thin coating of clay upon land which is very sandy and has been somewhat deeply ploughed. I have thus improved the quality of poor land surprisingly. I would advise to do this; manure well and sow with winter rye. A CONSTANT READER.

Winthrop, Mass., Oct., 1869.

DEATH OF A FARMER.

Lorenzo J. Day, a successful farmer of this town died on the 11th of August, from injuries received by a fall from a load of hay, July 21, which so injured his spine that though suffering greatly, he was entirely helpless. He was systematic and thorough in all his work, "having a place for everything, and everything in its place." For several years he had taken the NEW ENGLAND FARMER, and his drained fields, good fences,

clean tillage and abundant crops, were evidence of the care with which he read its pages. He was about 70 years of age. A NEIGHBOR.

Bristol, Vt., Sept., 1869.

OCTOBER.

Thou monitor of Winter's reign,
Approaching fast his crystal throne,
Last of dead Summer's funeral train,
Her treasures all thine own.

Thy pallet spread with magic dyes,
The forests painted by thy hand
Stand glowing neath thy sombre skies
Throughout the land.

Through orient windows of the morn,
The sun looks forth with regal blaze;
What glorious tints the fields adorn
To meet his gaze.

As ruddy fires o'er mountains sweep,
Like some old allied hosts arrayed,
High up the foliaceous steep
Red banners are displayed.

The tall elm's drooping branches bend,
In the light breeze at morning hour,
With yellow drapery to send
To earth a golden shower.

Midst bowers of pale and emerald hue,
The walnut stands in sober brown,
Where boys shake, when their task is through,
The brown nuts down.

Pay-mistress of the laboring swain,
Who laughs as soon as thou art born,
For he knows thou wilt load his wain
With golden corn.

The leaves light from the tall shade tree
Down at the quaint old farm-house door,
Where sounds glad mirth and jollity,
Till hus'ing time is o'er.

Epping, N. H., Oct., 1869. M. J. HARVEY.

A MUCK MEADOW.

I have a muck meadow comprising about ten acres. A considerable stream passes through its centre. It is dry and hard enough to bear a team at all seasons of the year. What crops can I raise on it most successfully? Will corn grow there? Suppose I can raise grain, is there any danger of diminishing its fertility? I can flow the whole by building a dam some four feet long,—the highway forming the remainder of the dam. Please give me such directions for its treatment as you deem most advisable with a view of ultimately cutting grass. ZEN.

Androscoggin Co., Me., 1869.

REMARKS.—The first thing to be observed in such a meadow is its hygrometic condition; as, if the water stands too near the surface, the soil will be too wet; will be cold and plants will not send their roots down into it. On the other hand, if it is drained too deeply, it is so light and porous that in a season when rains are not frequent, it would become so dry that nearly all plants would suffer for want of moisture.

If possible, in all such meadows, the height of water should be under the control of the cultivator. This may be done by a dam or other means, so that he can preserve it at all times at such a level as will keep the whole mass in a moist condition, from the water level to the surface.

On uplands, the black soil of the surface varies in thickness, and is followed by what is usually called a "hard-pan" of clayey or gravelly loam, which prevents the water from passing off rapidly, and at the same time is constantly supplying the surface with moisture by capillary attraction.

On muck meadows a contrary course takes place. After the water is drained away, the whole mass lies lightly, is porous, so that sun and air easily penetrate it, and it soon becomes quite dry, not only on the surface but to a considerable depth below. When rains are frequent it will be sufficiently moist to sustain the growth of plants; but in a moderate drought the plants soon cease to grow. Hence the necessity of having the water under control.

In a meadow where the muck was several feet deep, but where the water was under control, we have seen Indian corn, beets, onions, cabbage and other vegetables growing luxuriantly and thoroughly perfecting themselves,—so were squashes, melons, cucumbers, &c. The best grasses also grew finely. You ask if "there is danger of diminishing its fertility?" Certainly, there is. It will need the generous hand of culture, as well as the uplands. But with fair treatment it will prove to be among the most profitable lands, because so easy to work and so certain of carrying crops to perfection in dry seasons.

BUCKHORN—HORSE-TAIL—ONOCLEA SENSIBILIS.

You have recently cautioned your readers against the use of the plant known, indifferently, as "Horse-tail," "Mare's-tail" or "Polypod,"—the assertion being that its effects when fed to horses are very injurious. In this vicinity there are many farmers who believe that the plant known as "buckhorn," is poisonous as horse provender. Now, are "polypod" and "buckhorn" one and the same thing? ESSECKER.

Danvers, Mass., 1869.

REMARKS.—We are not certain what plant is known in your section as "buckhorn." That name is applied in Darlington's "Weeds and Useful Plants" to a species of the plantain,—*Plantago lanceolata*,—where it is remarked that nearly all kinds of stock eat this plantain freely, and it has even been cultivated expressly for a sheep pasture, but it is generally much disliked in Pennsylvania. If this is what you mean by "buckhorn" it is quite unlike the horse-tail in appearance and manner of growth.

The plant for which you ask the name was sent to one of our young friends in the agricultural college at Amherst, who has very kindly given the following answer:—

The botanical name of the plant you sent is "*Onoclea sensibilis*,"—a fern which is very common in wet places. I showed the specimen to our Professor in Botany. He says he never heard it called "buckhorn," but thinks the name would be very appropriate.

There is a fern which resembles this somewhat,

called "*Polypodium vulgare*," the common name of it being "polypody;" but these common names may change. The new Freshman class numbers thirty-three, so that we have in all about one hundred students here. For the last two weeks our class have been engaged underdraining the wet land about the new barn. A. H. B.

Amherst, Mass., Sept. 28, 1869.

DOVER RED, OR HORTON POTATO.

Having read several statements illustrative of the great fertility of the Rose and other new varieties of the potato, I thought I would try a little experiment with an old sort, the Dover Red, which has been considered a shy bearer. The soil of this beautiful river town is a disintegration of stone and silex, common on the Hudson below the Highlands. This soil is soft and pliable after rains, but when dry it becomes so hard and tough that it cannot be worked with ordinary garden tools. The spot experimented with was a hard sod on which the grass was six to eight inches high when it was spaded, and no manure was applied.

From two small tubers, both weighing three ounces, I cut out twelve eyes with a pen-knife, taking very little of the potato, so that the twelve eyes did not probably exceed half an ounce. These were planted separately, ten inches apart and four inches deep, about the tenth of May. Eleven of the twelve eyes grew well for eight or ten weeks, under the stimulus of the frequent rains of last spring. Early in August there was a drought which continued, with an occasional shower, till they were dug, the 27th of September, at which time the vines were fresh and apparently growing. The stalk from one of these eyes measured at the butt two and a quarter inches in circumference, and six feet and two inches in length, with nine branches, the length of which with the stem, exceeded sixty feet. This vine produced one and a quarter pounds of potatoes. Some of the other vines were nearly as large. The produce of the eleven vines was seven and a quarter pounds, though from the severity of the two months' drought the potatoes were probably not more than half grown.

On digging the potatoes I found them with the "Peach Blow" coloring,—skin mottled pink and white. The Dover Red when cooked is a pure white potato. Who can account for this change of color? H. Poor.

Yonkers, N. Y., Oct., 1869.

Remarks.—The following description of the Dover or Worcester Seedling, is from Mr. Burr's *Vegetables of America*. "Tubers of a pinkish white color, and similar in form to the Jackson White. Eyes deep-set, flesh white. Stalks upright; blossoms pinkish, but not abundant."

ALSIKE CLOVER.

I have grown a plot of this new variety of clover for two years, and am prepared so far to endorse Mr. Baldridge's remarks in the Farmer, with regard to it. I am sure that no plant with which I am acquainted will bear comparison with it as a honey producing plant. My plot was literally alive with bees, while the white clover in the adjoining fields attracted but very few. Unlike the red clover, the stalks are small, and both stalks and leaves continue perfectly soft and green until the seed is ripe; consequently the hay is not injured in the least by maturing the seed. It seems to be perfectly hardy, while in our latitude, the ordinary "Red Clover" winter kills as often as otherwise, consequently comparatively little is sown even on our light soils where it would otherwise be invaluable and almost indispensable. We hope that this new variety will make up the deficiency in the clover crop in this northern section. I have no seed for sale, and do not consider my experience conclusive, for our last winter was remarkably favorable, and all clover wintered well.

West Georgia, Vt., Oct. 1, 1869. O. C. Wait.

CHERRY POISONING.

I have read the remarks of Mr. Simonds with much interest. The loss of three valuable cows in this place,—two of which were known to have eaten the foliage of the wild cherry,—leaves no doubt in my mind that in some seasons, and in some conditions, the eating of a small quantity of the green or wilted leaves will cause death. Among the *reading* farmers in this place, it is a settled conviction that wilted cherry leaves must be fatal, but that green ones are not so. The active poison is undoubtedly hydrocyanic, and it may be, that wilting developes it. When an animal has been kept in the barn until June 15, I should consider it highly dangerous to give it access to the cherry. In the spring, a limb or two is removed from a cherry tree near the house, and in some cases is permitted to remain. If cattle have access to it at such time, trouble may be apprehended. So in regard to trimming up trees in the road. Those who depend on *street pasture* occasionally get more than they bargain for. Cattle confined to the barn during the year, are not, and cannot be healthy. They should have a small pasture, if not more than three rods square, in which to get a bite of grass daily, and breathe a little sweet, pure air. But this opens up the whole question of soiling of cattle, and I do not propose to say anything about that.

L. W. Puffer.

North Bridgewater, Mass., 1869.

MILKING A KICKING COW IN SAFETY.

I have a kicking cow which I milk in perfect safety. I bore one and a half inch hole in the stable floor just behind and a little to the right of the right-hind foot of the cow, as she stands tied up in the stall, and against a partition on the left. Then procure a stout stake, fit it in to the hole in the floor and to a simple fastening in the scaffold floor, and put an iron bolt with a one and a half inch eye through this stake, about eight inches from the floor. Into this bolt, I put one end of a stick; the other end going into the partition. This stick comes close to the cow's legs and behind them. A small chain is then fastened across from the stake to the partition about three feet from the floor; and a stout board is placed on the right side of the cow, reaching from the floor to the scaffold in such a manner that it can be easily removed by me, but not by the cow. I then have two stout, short straps to buckle around her ancles. To these straps ropes are attached. After putting on the straps, pass the ropes first beneath the stick and up around it once or twice and to the stake above on one side and to the partition on the other and fasten them.

I can put on and take off this anti-kicking concern in less than one minute, long as it has taken me to describe it. Indeed I really believe I could have milked a dozen kicking cows in less time than I have been writing this, and done it better. I find it takes a great many words to describe a very simple thing, and I wonder newspaper men do not become disgusted with their business. Please straighten out and shorten up my description if you can, or burn it if you please; but my cows are not going to kick me when I am milking, nor I them.

In my apparatus the cow can not get forward nor backward, nor sideways, nor lie down; all of which she attempted with desperate exertions. Nor can she kick at all. Stand she must, and that

was all I wanted of her. The whole rigging was used a short time, after which I put on only one strap and rope, leaving the left leg free. Try it, ye who have vicious cows, and not beat them with the milking-stoool. LEWIS L. READ.

Hebronville, Mass., 1869.

ASHES ON GRASS LAND.

I wish to inquire of you which is the best time to spread ashes on grass land, the fall or spring, and how much would be a good coating for an acre? NORMAN TAYLOR.

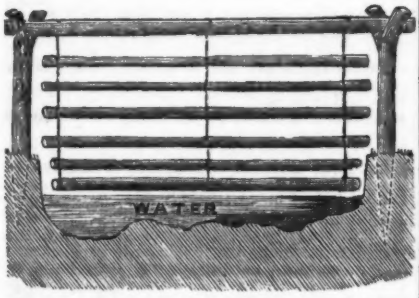
Plymouth, Vt., 1869.

REMARKS.—Sow it any time when you can make it convenient. Five bushels to the acre will be useful, but a larger amount would be better. If there were but twenty bushels to be used we should advise sowing it upon *two* acres rather than upon one. If one has an abundance of ashes, more than ten bushels to the acre would probably be useful.

FLOOD GATES.

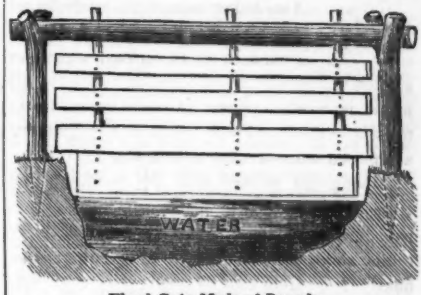
Fences across streams and those on the intervales which skirt the streams in New England have been swept away by the late flood to a larger extent probably than has ever before been done by any previous freshet. Lumber is dear and in many places scarce. It will be a serious matter with many farmers to replace them, especially with those who have lost heavily in crops and stock, and in other ways. On passing from Springfield, Mass., to Hartford, Conn., last week, we saw sad evidence of the destruction caused by the flood.

With a desire to aid those who must now go to work and replace their fences about the streams which pass through their farms, we copy from the *Rural New Yorker* the following illustrations of two plans for flood gates, which are well adapted to the purpose. The



Flood Gates Made of Poles.

one above is made from poles of the desired length, woven together with strong wire, which, in turn, is secured to the overhanging pole. As the water rises the poles float upon its surface and do not in the least impede its onward progress. The one given below is more expensive in its construction; it consists in inserting through holes made in the overhanging axle three or more rods or pendants, of sufficient length to reach near the bed of



Flood Gate Made of Boards.

the stream. To these are firmly nailed boards, as shown. The lower ones are close together, which precludes all possibility of its becoming filled or choked up with flood wood or other rubbish that may have gathered in the current. This, like the one made of poles, adapts itself to the surface of the stream. The advantage and superiority of these gates over a permanent structure across swift flowing streams, is obvious to all.

TO CURE WARTS ON HORSES.—Henry R. Tryon, in the *Rural New-Yorker*, tells us how he cured a large wart on a horse belonging to him:—

"Two years ago I bought a large Clyde colt which had a wart as large as as man's fist on the hind leg, just below the stifle joint. The following remedy I procured from an English horse-farrier, which not only removed the wart, but left the surface smooth, and it haird over. I purchased a two-ounce vial of butter of antimony, and applied it with a feather tied to the end of a long stick three times a day, until satisfied that the roots of the wart were dead, (this can be determined by discontinuing the application for a week; if the wart starts to grow apply more.) After I had thoroughly burned it out in this way, I applied the following to heal it over:—One pint rum, one half-pint soft water, one ounce aloes, one-fouth ounce myrrh; pulverise the aloes, mix and wash. I applied this wash three times a day, and it healed over smooth and nice. Now I have given gratis a remedy which if procured of the horse-farrier would have cost you a five-dollar bill."

STEAM TRANSPORTATION.

Its Influence on Crops and the Value of Land

CHANGES of much importance are taking place in the farming operations of the country. New crops are being introduced, better methods of culture are being adopted, agricultural machinery is being rapidly introduced in great variety, and to an almost unlimited extent. Better stock of all kinds is raised; cheese is made in factories; milk is condensed, and fruits and vegetables are preserved, on a gigantic scale.

Among the causes that are working this transformation, steam transportation is, perhaps, the most important. Our country extends 1500 miles from north to south, and nearly 4000 from east to west; but such are the facilities afforded by steam, that these immense distances can be traversed in a few days, and fruits and vegetables can be transported in a fresh condition from one extremity to the other.

Planting is commenced in Texas and Florida in February and continued through March and April. In Maine and New Hampshire it is commenced in May and continued into June. Early vegetables from Texas and Louisiana can be laid down in the markets of New York and Boston, about the time they are planted in the immediate vicinity of those cities. Thus the season during which green vegetable food is in use, is greatly prolonged. This commerce is to some extent reciprocal. Northern fruits, potatoes and onions are transported in the autumn to the Southern markets. Steamers pass from New Orleans to New York in five or six days; from Savannah and Charleston in three or four, and from Chesapeake Bay in twenty-four hours.

Illinois is about 400 miles in length from north to south. Chicago is supplied with strawberries and early vegetables from Centralia and the southern section of the State, and twenty days earlier than from the Michigan shore of the Lake. And now, excellent pears and grapes from California are found in good condition in the New York market.

Thus by means of steam every section of country participates in whatever advantages of climate exist in every other section. The luxuries of one section are distributed to every other.

Another, and a very important effect of steam transportation is that it equalizes the value of land. Land for agricultural purposes depends for its value upon its market facilities. Now lands one or two hundred miles from the city market are worth as much per acre, as those situated fifteen or twenty miles distant. As you get beyond the limit to which manures from the city stables c n be profitably hauled, farming lands assume a nearly uniform value. Improved lands in Ohio, Illinois and Michigan are worth as much as in the interior of Massachusetts and Connecticut. Lands within ten miles of the market to which manures can be teamed from the city, by which double crops can be grown, and from which fresh vegetables and fruits can be daily carried to the market, will always be worth more than lands at a greater distance.

But most kinds of produce, including small fruits and wild berries, milk, poultry and eggs, are daily transported from one to three hundred miles. Green peas, early potatoes and sweet corn are transported by rail two and three hundred miles, and much further by boat. The effect of this is to raise the value of lands in the interior much more rapidly than in the vicinity of the market. And even if the crops of the interior were confined to grain, pork, beef and butter, the greater facilities for marketing these staples would increase the value of the land on which they were produced.

A few years since, the expense of teaming a hundred bushels of corn in Illinois to the nearest shipping town absorbed the whole amount of the sale. A railroad station in the vicinity of a farm quadrupled the value of the crops, and of course the value of the lands.

Steam transportation is causing manufactories to spring up all over the country. These create local markets for all kinds of produce, and of course increase the value of land. At these local markets, the limited demand not calling out so large a supply, the price is often as high or even higher than in the greater city markets. The whole tendency, then, of steam transportation is not only to enlarge the field from which supplies are drawn, but to equalize the value of every part of the field reached by it.

Another effect of steam transportation is that it enables the farmer in the interior to

avail himself of any peculiar advantage of his soil or location and select the kind of crop he chooses. Thus the farmers in the interior of New York, in the Seneca Lake country, and on the shores and islands of Lake Erie have special advantages both of soil and temperature for the culture of grapes. The farmers fifty or one hundred miles from the city, in the towns nestled in the sunny nooks on the banks of the North river, ship their thousands of baskets of raspberries and blackberries daily to market. They are no longer confined to staple crops, but may consult the capabilities of their soil or their tastes. They can command the use of artificial manures of various kinds, adapted to the crops they cultivate.

The facilities of steam transportation are rapidly extending the use of agricultural machinery. Improvements in agriculture within the few years past have been greatly due to the use of machinery. Machines are generally bulky and heavy, and their cheap transportation has greatly increased their use. Competition and steam are placing them within the reach of small farmers in every part of the country.

There are many other respects in which the use of steam is influencing the operations of farming, but we have already so extended our remarks that we will mention but one, and that is the extension of improved stock of all kinds throughout the country. It is but a few years since it required weeks of time, and much expense, to drive a few animals to a State Exhibition or to a distant section of the country. Now the annual sales of the breeders of pure blooded Short-horns or Alderneys are attended by breeders from distant States, and their purchases are rapidly and safely transported to their homes. Horses and sheep from Vermont are conveyed to the prairies of the West, and to the plains of Texas, and animals with irreproachable pedigrees are found beyond the Mississippi, and the whole stock of the country is undergoing a rapid amelioration. Suffolks and Chester Whites are sent from Massachusetts to Mississippi. Thus, whatever good qualities are possessed by any variety of stock imported or raised in the country are soon shared by all, and the facilities for transporting beef, mutton, pork and veal to market enable the breeders to realize a profit from their sale. In addition to these direct advantages to agriculture, the international commerce thus produced, serves to unite the people of distant sections, and to nationalize their interests and feelings.

AMERICAN INSTITUTE FAIR.

The managers of the American Institute (New York) exhibition, it will be remembered, made provision for a show of the wool from the sheep of the farmers of the whole country, and invited them to send in samples of fine and coarse, of light and heavy, of short and long wool. We have seen but few notices of this part of the show, and do not know how generally wool growers have exhibited their productions. We fear, however, that the display is not very creditable to this important industry. The *Rural New Yorker* has a notice of the exhibition, which occupies over a column, without a single reference to the wool department. In relation to manufactured goods it says:—

> Walk along these pyramids of woolen, cotton and silk goods. Feel their texture. Listen to those who talk of them. What do you hear? "This sample is very nice." And that is all! They thank no one that our own wool, grown upon our own sheep, the product of our own grass and corn, is spun, colored and woven in our own mills, by machinery made from our own iron and steel by Americans who invented it! And yet it is just the lesson this exhibition is intended to teach, and these the facts it is designed to emphasize! Import goods! No, sir! Import men and skill, rather, to consume in skilful manipulation what our farms, flocks, herds, mines, forests and quarries produce, and prepare the same for our consumption, thus keeping our own wealth circulating in our own country, and exporting only articles upon which no more of our own well compensated labor can be expended.

DIVERSIFIED AGRICULTURE.

At the north, farmers have long practiced a system of mixed husbandry, believing that as far as possible the productions of the farm should supply the wants of the family of the owner. Hence stock and grain, butter and cheese, fruit and vegetables are among the products of nearly every New England farm, whether embracing fifty acres or several hundred. But of late some of our agricultural teachers recommend more attention to specialties. At the South, however, where special crops have long been the rule, and diversified farming the exception, public opinion is setting strongly against the old practice. Notwithstanding that in several kinds of crops, farmers there have enjoyed the advantages of

a monopoly, and many circumstances have seemed to favor specialties, the result has been far from satisfactory. A writer in the *Rural Carolinian*, in discoursing on this subject says:

Whether cotton, wheat, or any other crop, is made a specialty for whole States, failure must result. If proper effort is put forth the market is glutted and the price low, while the cost of everything else will be enhanced many fold by the labor and cupidity of our army of producers and carriers. The old cotton crops, with very few exceptions, never commanded $200,000,000; the present crop, half as large as the largest ever made, is worth more than $150,000,000 in gold to-day, while corn is becoming plenty, wheat increasing, and the people more self-reliant and nearer self-supporting than ever before.

While cotton may ever be a prominent crop, it should only be cultivated as *one* of several products for exportation, and an ample sufficiency of everything consumed upon the farm should be grown at home. The idea that Southern horses should be obtained in Kentucky, flour from Missouri, and part of the corn supply from Illinois, has been a curse to the cotton States. Specious and false was the theory of reciprocity of material interests; it never can be profitable to carry bulky agricultural products a thousand miles, to be used on soils as rich and cheap as any in the world, at an expense for transportation far exceeding the cost of production at the place of consumption. The variety of which this region is capable is truly wonderful; embracing all the cereals, grasses, vegetables, and fruits of the temperate zone, with many of the productions of the tropics. A belt extending from twenty-five degrees to thirty-nine degrees north latitude, including a range of elevations amounting to 6000 feet, and geological formations from the primitive granite to alluvium now in the process of deposition, cannot become a wealthy region by persistence in the culture of a single product.

For the New England Farmer.

FARMING IN LEXINGTON, MASS.

Rosedale Farm.—Home-made and Commercial Manures.—Salt and Lime with Muck—Wheat and Oats.—Improvement of an old Wet Meadow.

In introducing myself as an "Old Young Farmer," it may be proper for me to say that I was raised in the interior of New Hampshire, and worked on the old homestead until I was seventeen years old; that I then spent forty years in business in Boston, and have recently bought and moved on to a farm in Lexington, Mass., of one hundred acres. Consequently, though I am old in years, as I look over my fields and attempt to decide on definite plans for their management and improvement, I find I am a *young farmer*, and need the counsel of those more experienced in farming, though perhaps younger in years. That this counsel may be given intelligently, I will attempt to draw up a description of my farm, and give some idea of what I wish to accomplish. The one hundred acres comprise a great variety of soil. While a large part of my farm consists of a light sandy land, there is considerable heavy loam of good quality, and not a little wet muck meadow. A brook passes through the farm, forming a valley some twenty-five feet below the table land, with several acres of rich intervale skirting the stream. From the banks of this valley several springs issue, and here I wish to cultivate trout. In this valley and near my house, there is a mineral spring strongly impregnated with sulphur and iron. Having been an invalid for ten years, I have realized more benefit from the use of this water for the last month or two than from all the medicine I have ever taken. This whole region appears to be filled with iron.

My barn is situated on the bank of this valley, the front part being level with the main land, and rear sixteen feet above the ground. This basement is divided into two stories; about one-half of the first floor being above ground, and one-fourth of the lower. The first floor or story is occupied by stables for my stock, and the lower is devoted to hogs, and ordinary basement purposes. Both are well lighted and ventilated, and face the south. All the manure from the stock passes below for the swine to work over. A six-inch drain pipe leads from the water closets in the house to the lower part of the barn, where it is absorbed by muck which is daily applied for this purpose.

In the rear of my barn, and within a hundred feet of it, there is an extensive bed of rich muck. From the teachings of the NEW ENGLAND FARMER, and from that of my own experience, I place a high estimate upon the value of this deposit. During the past season I have experimented with several of the commercial manures on different crops, side by side with my home-made manures, and in every case the latter has proved far superior to the dear-bought, far-fetched, and much puffed fertilizers. I believe farmers are terribly humbugged by the great noise made by the manufacturers of artificial manures, and am well satisfied that I can manufacture manure that will give better satisfaction at far less than half the cost of the commercial articles, and believe every other farmer can also.

I am now getting out muck for another year's use, and as I intend to make a large pile of manure, I wish to be informed whether lime, salt or any other substance can be economically mixed with the muck,—will it help enough to pay expenses? Manure I find to be the great secret of successful farming, but still most of us must study economy in the cost of our fertilizers.

I was told when I commenced farming this spring, that it was no use to undertake to raise wheat. I replied that I was going to try it on a small scale to satisfy myself, as I believed wheat could be raised here as well as in other places. I procured half a bushel of spring wheat and sowed it on about half an acre of rich soil that had been well manured and planted for two or three years. I put on the land about a bushel of salt and about two

bushels of lime. The result is that I have raised as handsome a piece of wheat as can be found in New England. It filled out and ripened well, but as I have not threshed it yet, I cannot give the precise amount of the crop. It is estimated at from twelve to fifteen bushels. All who have seen it were much surprised as I believe there has been but very little if any raised in this vicinity for many years. I have no doubt it was thought a great piece of presumption for a green farmer like me to undertake to raise wheat. Many of my neighbors had about as little faith in raising oats as in raising wheat. They said that oats generally mildewed and musted so that it seldom filled out or ripened; and hence they cut them green for fodder. But I determined to try them, and the consequence was that I had about two acres of very handsome oats well filled out and well ripened.

I have a reclaimed meadow of five or six acres that formerly produced a heavy crop of good grass; but it has been neglected until it has grown up to a coarse, wiry grass, and is becoming filled with hassocks. A small brook runs through it. The old ditches have been neglected for years, and had become filled up. I am having them cleared out, but fear that will not bring it into good condition without ploughing, which must be a hard job. Can you give me any information on the subject? There are many other questions that I should like to ask, but I have scribbled so much already that I fear you will throw it all into the waste basket. If you should not, you may hear again from

AN OLD YOUNG FARMER.

Rosedale Farm, Lexington, Mass., Sept., 1869.

For the New England Farmer.

GEN. BUTLER'S SPEECH.

Gen. Butler in his speech before the Agricultural Society at Worcester, has called attention to important matters, affecting not only the Agriculturist but all classes in the community as well. There is a tendency not only in individuals, but in classes, to make use of public institutions and legislative authority to advance their own special interests. This is shown by the fact which he mentions, that a large part of the last session of our Legislature was occupied by special legislation. The same thing is shown by the conflicts between private interests in the Legislatures of all the States, and in Congress also.

The various "rings" that are formed, and the immense sums that are paid and used, not without suspicion of indirect influence, afford abundant evidence that regard to private interest, rather than public good, is the cause of the persistent pressure brought to bear upon legislation.

In our own State, an immense capital is invested in manufactures. Our prosperity as a State depends very much upon their success. But this is no reason why other interests should be sacrificed to the interests of manufactures. There is surely no reason why the interests of agriculture, which is the basis of all national prosperity, should be sacrificed to any other interests.

We have had, and now have, some striking illustrations of the fact that the interests of the farmers of our Commonwealth weigh but little in our Legislature in comparison with the interests represented by large and combined capital. There is now in the centre of Middlesex County a large tract of land, embracing thousand of acres of the best land in the county, almost entirely ruined, to enable a comparatively small manufacturing establishment to save the difference between the cost of running their works by water power and steam power. The same fact exists in Norfolk County and in various other places in the State.

A law was enacted a few years since, requiring a certain dam to be reduced for the benefit of a large number of farmers. The very next year, manufacturing capital combined and procured the repeal of the law, lest other dams should be reduced in the interest of agriculture.

But we fear that there is a disposition not only to make use of legislation to promote private interests, but also to make use of public institutions to advance private ends. There are indications that some of our Agricultural Societies, which are sustained by a tax upon the whole community, are falling out of the control of the farmers into the hands of "fancy men" and "specialists," who use them to promote their own special purposes. We have noticed that owners of fast horses offer premiums to be awarded through the committees of County Societies for the best colts sired by such horses, which looks to us very much like using these institutions to advertise their horses, and put money in their own pockets. Herds of fancy stocks, bred with reference to high prices, and fixed up for show, occupy conspicuous positions at our cattle fairs, and carry off a large share of the premiums, under the pretence of promoting the public good, to the disgust of the plain farmers who too often find their claims entirely overlooked. So, too, nursery men and inventors are not satisfied with making these occasions means of advertising their wares, but claim the premiums as well. There is no doubt that many patriotic and public spirited men have imported stock and fruits from regard to the public good; but surely at the present day, there is no need of taxing the community to reward those who do it for the special purpose of making money by the operation.

The man who imports the best leather, or the best woolen cloth, or the best silk goods, may with equal justice claim a premium on his importation, on the ground that it tends

to improve our own manufactures. It undoubtedly has this tendency, by exhibiting the best models, and compelling our manufacturers to greater exertions in these directions. But the day has gone by, for taxing the community for such a purpose. Self interest is a sufficient inducement. Indeed this is the moving power in most of the so-called public enterprises of the day.

Charters are granted for rail-roads, and their stocks are guaranteed by Congress and State Legislatures, on the plea that they promote the public good, and they doutless do promote the public good to a certain extent. But the motives underlying them, are to enable individuals to speculate in lands, and to enrich themselves by exorbitant freight charges at the expense of the laboring classes. This last evil has become a grievious oppression to the whole nation, and will require a remedy in national legislation. Farmers are generally men of small capitals. These capitals have not been and cannot be combined for self-defence—and there would be no occasion for such combination, were not accumulated capital, employed for other purposes, allowed to override and oppress the interests of agriculture.

Excessive legislation may become oppressive, and when it is employed to promote the interests of individuals and classes, at the expense of the community, it has already becomean oppressive burden, calling loudly for a remedy. Although Gen. Butler, in the speech referred to, said some things which we cannot fully endorse and some things which we think unwise, yet on the whole, we thank him for the bold words which he has uttered, and we trust they will prove good seed on good ground. R.

Concord, Mass., Oct., 1869.

For the New England Farmer.

WHITE DOYENNE, OR ST. MICHAEL.

It has long been asserted, and was recently by the honorable President of the American Pomological Society, that the above pear had become worthless, and probably would continue to be so. I feel a great diffidence in questioning anything emanating from so high authority; yet I think the St. Michael is destined to bless the coming generations as it has the past.

I have been cultivating the pear for a few years on a small scale. I have twenty-eight varieties of trees; fifteen varieties have fruited, and I rank the St. Michael among the best. There are several so excellent in tree and fruit that I don't know which to call first.

I have one tree of this kind, about eighteen years old from the seed, which commenced to bear when very small, and has borne full every year since. The fruit is of good size and always fair, and as juicy and delicious as those I ate at my uncle's, in old Newbury, fifty years ago, and I have never seen a pear cracked or unhealthy. I have now one and a half bushels which grew on that tree which will compare well with the same pear fifty years ago, though some of them are smaller than they should be, for I did not thin them as much as I ought.

About eighteen years ago I set sixty pear trees on a piece of ground where I had raised corn two years previous, with a light dressing of barn manure each year. The trees did very well for one or two years, and then began to be sickly, the limbs dying and some of the trees dying nearly to the ground, and it went on from bad to worse till every tree was dead. Several of my neighbors and acquaintances had a like experience. I was somewhat discouraged, but not willing to give it up. I set more trees than I had before, and then went to work to make a soil for their proper nourishment. I concluded to follow the teaching of Nature, and enrich my land by top-dressing and mulching with wood and leaves. The result has been that every tree that I have treated liberally in that way has done all that I could wish, though my land is in a valley where the original growth was mostly hemlock and spruce, which is unfavorable for fruit raising. My trees are all on greensward and most of them overrun with witch grass. I prune in the fall and winter.

STEPHEN ADAMS.

West Newfield, Me., Oct. 15, 1869.

For the New England Farmer.

GEN. BUTLER'S ADDRESS.

On taking up one of my papers, I saw in large type, "Address of Gen. B. F. Butler, before the Worcester Agricultural Society, September 23d, 1869." And holding Gen. Butler's ability in very high esteem, I naturally said to myself, here is a treat; here will be something new. I found something new, indeed, but altogether of a different character from what I expected. Our agricultural orators generally try to create and strengthen sympathy between employees and the employed, and to show that their interests are one. But it appears that a large part of the General's address, rather tends to create dissatisfaction among the hired portion of our laborers,—(I was about to say laboring classes; but, Mr. Editor, we are all laborers.)

Was it the desire of the speaker to create such antagonism between labor and capital as exists in Ireland? What has this antagonism done for Ireland? It has almost entirely driven out capital, and destroyed manufacturing in that country, and agriculture has gone down with them, until a large portion of the inhabitants are obliged to emigrate or starve.

The General, speaking of inventions, says, that while a great deal has been done for the manufacturer, very little has been done for the farmer; so little, in fact, that he enumerates them at once: "The reaper, mower,

thresher and rake, with some improvements on the cultivator." We are told that the plough, shovel and hoe, are the same as our fathers used, and we must sweat as our fathers did in using them. This assertion, I think, will rather astonish some of our farmers and agricultural implement dealers. Before he delivers another address on agriculture, it would be well for him to step into some agricultural warehouse, if he has not time to visit our farms, and examine the gang ploughs, which turn some half dozen furrows at a time, while the operator rides in a cushioned spring seat, simply guiding his team; or the single steel ploughs of recent invention, and see if there has not been some improvement over the ploughs our fathers used.

If he is not satisfied, I should like to plough with him at the next Cattle Fair; he to have the old plough that his father used, and I to have my choice of modern ploughs, and see who will get the premium. As to the sweat, I venture the assertion that if the holder of the old plough don't sweat as much as the holder of the new one, the *team* that draws the old plough will sweat enough more to make up the difference.

I think it would be well for the General to look at the tedders, which enable the farmer to shake up and turn his hay more expeditiously than ten men could do it, and in a better manner, while all the operator has to do is to sit in a very comfortable seat and guide the horse; then examine the corn planter, which plants from two to six acres per day, the operator riding in a comfortable manner, and supplying the hopper with corn; the horse-hoes, effecting a great saving of labor; the feed cutters, the corn shellers, the stone diggers, stump pullers, ditching machines, grain drills, horse powers, which enable the farmer to saw his wood, cut the feed for his cattle, turn his grind stone, churn his cream, pump his water, &c. But for these and other improved implements and machines which have been introduced upon the farm, the soldiers in our late army, and the consumers now in our cities and villages, could not be fed.

The speaker further remarked that no improvement has been introduced upon the farm that would cause one spear of grass or one blade of corn to grow where it was not before This will be news to some of our intelligent farmers; especially to those on farms where twenty years ago not five tons of English hay were grown, but which now produce fifty tons, the land being cultivated by these new improved implements, while the farmers put in practice the true science of cultivating and dressing the land. CANDOR.

—A small amount of lime mixed with wheat that has acquired a musty smell by having been slightly heated, will sweeten without injuring the wheat.

WOOL AND WOOLEN GOODS.

There was a gathering of the wool and woolen interests at the exhibition of the American Institute in New York last week, at which Hon. E. B. Bigelow, President of the National Wool Manufacturers' Association, delivered an address embodying the following facts:

The annual value of the wool manufactures in the United States, and of those manufactures of which wool is a component part, is not less than $175,000,000. Of these goods, more than four-fifths are made from American wools. The coarse carpet wools, which are not grown here at all, the worsted combing wools and the fine clothing wools which are grown by us only in limited quantities, go to make up the rest.

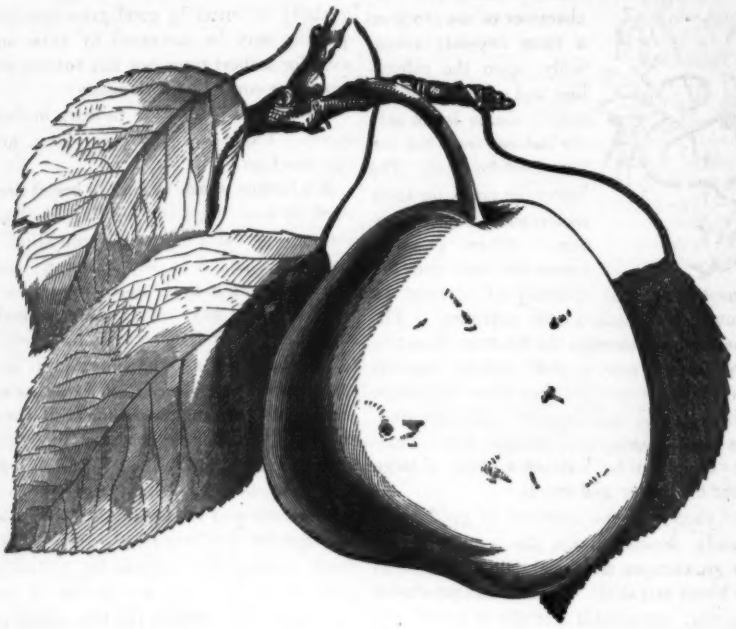
A great advance has been made in woolen manufactures in a comparatively short time. Ten years ago we attempted scarcely anything beyond common goods of the coarser kind. Now we manufacture almost every variety of woolen fabrics in general use. The annual consumption of woolen goods in the Union amounts in round numbers to $240,000,000—of which $65,000,000 is imported and $175,000,000 is of domestic manufacture.

The condition of our wool industry in 1868, as compared with the years 1850 and 1860, is shown by the following tabular statement:

Items.	1850. Lbs.	1860. Lbs.	1868. Lbs.
Pounds of Wool grown,	52,516,959	60,513,343	177,000,000
	Dollars.	Dollars.	Dollars.
Value of wool imported,	1,681,691	4,842,152	3,915,262
Value of Wool manufactures imported,	17,151,509	37,937,190	32,469,759
Value of Domestic Wool manufactures,	45,281,764	63,865,933	175,000,000

This shows conclusively that it is not by the importation of foreign goods that our market for wool and woolens is depressed, the value of imported woolens for 1868 being five and a half millions of dollars less than it was for 1869. Most evidently the great cause of the present depression is excessive home production of one kind of merino wool. As to the present tariff on wool and woolen goods, Mr. Bigelow stated:

"It was at a conference of leading manufacturers and growers of wool from all parts of the United States, and after full consideration and discussion, that the principle which underlies our present tariff on wools and woolens was unanimously adopted. It is, in fact, only a clearer and stronger expression of the idea on which the (so-called) Morrill Tariff of 1861 was partly based. It aims to give equal protection to him who raises and him who works up the raw material. It tends directly to reconcile great interests, which had been falsely regarded as antagonistic. Unless these views are fallacious, it is just as much the duty of a nation to protect its own industry against the injurious effects of foreign competition as it is to provide the means of defending its soil and its homes against the aggressions of open war."—*Ohio Farmer.*



THE OLD ST. MICHAEL, OR WHITE DOYENNE PEAR.

In connection with the hopeful view taken by a correspondent, on another page, of the possibility of producing this favorite old pear in New England, we present above an illustration of its fruit.

At the Fair of the Norfolk county, (Mass.,) agricultural society, at Readville, last September, some beautiful specimens of the St. Michael, raised in California from scions obtained of Hon. Marshall P. Wilder, were exhibited, and tested by the Committee of the fruit growers of that county. Col. Wilder and other judges pronounced the flavor equal to that of the fruit raised here when the St. Michael was in its glory; while all present agreed that by no skill in cultivation and training could it now be raised in that section, with even a fair degree of perfection.

That the variety is not in its dotage, or run-out, as many have supposed, would seem to be proved by its vigorous growth, beauty and perfection on the Pacific coast, and on the grounds of our correspondent.

Though of French origin, this pear is popular in England, where it is known by different names in different sections. In the region about Boston it is called the St. Michael; in New York, the Virgalieu; in Pennsylvania, the Butter Pear, &c. This confusion in names attests to the wide popularity of the fruit.

Mr. Cole describes the fruit as "rather large; obvate; clear pale yellow, with small dots; a red cheek full in the sun; stalk an inch long, stout, in a small cavity; calyx small, in a shallow, finely plaited basin; flesh white, fine texture, melting, very buttery, of a rich, high, delicious flavor. Oct. and into Nov. Many regard this pear as a standard of excellence; many others prefer the Seckel. It is perfectly hardy in tree and fruit, and first rate in quality in the Middle and Western States, in Western New York, and in the region of Baltimore; but it generally blasts and cracks in New England, on the sea-coast, yet it still flourishes in the interior. Where uncertain, it does better on the quince.

A GOOD FARM MAKES GOOD STOCK.

SOME one has said "the character of the stock on a farm depends essentially upon the cultivation and condition of the soil." Grass is not only the natural food but the best food for stock. The better the grass, the more nourishment does it contain. When grass is coarse and sour and full of weeds, a great quantity of it must be consumed to obtain a little nutriment. The animal must go through the labor of digesting a large bulk to gain a small result; whereas if the grass is sweet and free from all foreign admixtures, the nourishment is concentrated, and a small quantity of it contains more nutriment than can be extracted from a large amount of bushes and weeds.

The success of the breeders of good stock generally depends upon the quality of the grass grown upon the farm, quite as much as upon blood and skill. A gentleman purchased a fine cow, remarkable for the quantity and quality of her milk, and took her to his home, where she soon fell off in the quantity of her product. When he complained that she did not sustain her reputation, her former owner replied, "When I sold you my cow, I did not sell you my pastures."

When we read in the papers accounts of the sale to the butcher of fine three-year-old steers, or two-year-old heifers, at a high price, we consider it evidence not only of good blood, possessing early fattening qualities, but also of good soil, well cultivated. The Johnsons, the Lathrops, the Chenerys, the Morrisses and other celebrated breeders, all raise good hay, on a clean soil, and cut it and put it into their barns while it still retains the qualities of grass.

Fifteen or twenty pounds of butter a week, not only prove the superior character of a cow, but also that she is kept on a good soil, well cultivated. For we hold it impossible to bring a cow up to the condition in which she will yield such an amount by any other means.

Grain may be given for a short time to finish off a fattening animal, but it will not secure the necessary conditions of health and growth. These can be obtained only by good grass and hay. So when a cow has been brought up to the condition in which she will yield a large quantity of butter by good grass and hay, the quantity may be increased by corn and oil meal for a short time, but this forcing process cannot be continued with safety.

Farmers have a lesson to learn in these respects. Experience and observation are the best teachers.

If a farmer wishes to keep or breed first rate stock he must begin by putting his pastures and mowing fields in first rate condition. It is a waste of capital to buy expensive animals and undertake to keep them upon poor pastures or poor hay. To attempt to make up the difference by feeding upon grain will take off all the profit, and the animals will inevitably deteriorate. There is no food that can be profitably substituted, in the long run, for grass and hay. Feeding upon large quantities of coarse food will injure their forms and change their characters. Feeding largely upon grain and concentrated food will injure their health and capacity for breeding. Milch cows fed chiefly upon good grass and hay will often do good service till they are twelve or sixteen years old. The cows in the city stables rarely last through the second year, fed as they are upon brewers' grain, and distillery-house slop.

A well-drained, well-worked soil will make good hay, and no other soil will do it. Until, then, the soil is in this condition, the best results, either in dairy products or in beef, cannot be reached.

THE SMALL FRUIT BUSINESS.—Instances in which great profits have been made under favorable circumstances by raising small fruits, berries, and other special crops, have often been published. Strawberries, raspberries, blackberries have paid from two to six hundred dollars per acre per year. New Jersey and the Western part of Michigan are localities of which great stories have been told. P. S. Linderman of South Haven, Mich., presents a view of the other side of the subject in the *Western Rural*. He shipped 12 crates, 192 quarts of Lawtons to Chicago. Freights, truckage, commission and crates cost $7.55; the berries sold for $12 64; leaving $5.09, or 2 cts. 6⅔ mills per quart for picking, shipping, postage, &c., to say nothing of raising, capital invested, &c. He tried a patch of strawberries, but had ploughed them up. One of his neighbors had one and one-half acres; he tried them two years and has ploughed up most of them. His only object, he says, in confessing these failures is to caution those not acquainted with the berry business to "make haste slowly,"

in entering upon the business of raising them for market.

A New Jersey correspondent of the *Gardeners' Monthly*, who has been experimenting on "Ten Acres Enough," sent several chests of strawberries to the Philadelphia market one day last season, for which he paid three cents a quart for picking. They were sold by his commission man for four cents a quart.

THE LABOR QUESTION IN KENTUCKY.

A report of the discussions at the weekly meetings of the Lexington, Ky., Farmers' Club has been published in the *Farmers' Home Journal* of that place for two or three years past. From the character of the discussions reported, as well as from the honorary titles of most of the members, we presume that the Club is composed of the leading men of the section.

The subject of labor, as might reasonably be expected from the great change which has been effected in the relation of the employer and those employed in agriculture by the abolition of slavery, has been a leading topic both of dissertation and of debate by this Club.

Very different opinions as to the effects of this revolution have been expressed; a great many plans have been proposed for the management of the labor that is now available, and numerous suggestions have been made for obtaining other labor.

Of late, the attention of the Club has been directed to the question of Chinese emigration. This is earnestly advocated by some and opposed by others. A plan for the combination of farmers interested in securing a large importation of Chinese laborers has been considered by the Club. At a late meeting, Col. Haden, as reported in the *Home Journal*, said that,

> He had had superior opportunities for informing himself in regard to the capacities of the Chinese. They are available now and are readily controlled, an important consideration in deciding upon the value of laborers. They will adapt themselves to our wants and be contented and faithful to their employers.

Mr. R. W. Scott also favored their introduction, but remarked:—

> The Irishman or Scotchman, who comes here as a day laborer, will in a few years, by economy and thrift, improve his condition and be employing laborers to do his own work. They make it their permanent home. But this is not the case with Chinese. They will come here to avail themselves of the high wages and to make money, not to spend it here or to remain permanently, but always with the intention of returning to the Celestial empire, as they term China. They will come here merely to make something to enjoy on their return, for in their belief, Heaven can never be reached unless the soul starts from the Celestial Kingdom, hence a Chinaman will go back to his native country with his earnings if he is alive, but if he dies, his dead body is returned. Thus a constant drain will be kept up on the resources of our country. With European laborers, the accumulated means will be devoted to the acquisition of land, improvements or otherwise expended here.

Judge Kinkead was at first inclined to view favorably the proposition to introduce Chinese labor here, but the information he had been enabled to gather since, had awakened doubts as to its advisability.

Dr. R. J. Spurr did not fear any injury to our people from coming in contact with these heathens, but on the contrary, is of the opinion that the influences to which the Chinese will be subjected here in our country, will be beneficial in the highest degree to them.

Dr. Gay opposed the combination plan. As to the value of Chinese labor, he knew nothing personally, but from conversations recently with those who have tried it, he was induced to believe that it would prove entirely satisfactory to our people. The mountain counties of our own State had hundreds of stout, industrious young men who would make reliable skilful laborers.

Squire Oldham thought it was utterly impossible for our farmers to enter into any combination that would prove effective. When slavery was abolished, he told his negroes they were free; then designating such as he wanted to retain, he informed them he would give them one dollar per day when they worked faithfully, but that they must provide themselves with food, clothes and all other necessaries. He has never had any trouble, and is convinced that fair wages, kind, considerate treatment and just dealing, will enable a farmer to engage as many good laborers as he wants, who will remain faithful to all their contracts. Proper treatment will make many negroes useful and reliable, who are now regarded as worthless. They can be controlled by the same influences that are potent with the white man; place the proper inducements before the freedmen, stimulate their sense of manhood, and make them feel that they are indeed free, and with the inculcation of such feelings they will prove more useful and more worthy of our confidence. There are trifling negroes through the country imposing on farmers and bringing reproach on the race; he would be glad to see this worthless class restrained and punished, but it is neither liberal nor just to condemn all for the unfaithfulness of a comparatively small number. He expressed the opinion, in reply to a question, that labor was as cheap now, here in Kentucky, if not cheaper than in adjoining States. He may pay his hands now a little more than he did in the days of slavery, but taking into consideration the numerous expenses he was subject to at that day, he thought his labor cost him no more now than it did then. In reply to a question by Judge Kinkead, Mr. Oldham said that in his opinion, the laborers now in our midst and young men and boys of our State, constituted our main dependence, the source to which we must look for the supply of labor we need. He believed it was in the power of our people by judicious action, to procure all the laborers required to conduct our agricultural operations.

Mr. P. H. Thompson said that he had experienced no difficulty whatever in procuring reliable industrious laborers. He pays men $12 a month and women without children $6 or $7 per month, and thinks they cannot support themselves on less. He tells them when he engages them, that they must work faithfully, without being watched, and obey orders; treating them fairly and paying

them living wages. They seem to be content, work faithfully and fill all their contracts; he furnishes them quarters on his place and has not suffered from dishonesty; his water-melon patch was exposed and accessible to all, but he gave his hands what they needed for their own use, and he does not know that anything was stolen. The greater portion of his farm he has put out on shares, furnishing implements, stock and feed for stock, and receives two-thirds of the crops as his share. He thinks that labor is cheaper now than it was during slavery—that is, it cost more formerly to work a farm, to support the negro and keep the sick and ineffective hands than it now does to hire the labor. He has been troubled occasionally to procure female servants, owing to their disposition to congregate in the cities. In this, however, he has not experienced the difficulty that others complain of. Give them enough to live on, and let them understand that they must work as faithfully when by themselves as when the employer is present. He thinks that they prefer the farmer to give the farm his personal supervision and to direct them himself.

Mr. M. T. Scott was equally as fortunate as Mr. Thompson, and can get all the effective labor he wants, paying hands $15 to $18 per month, boarding them also, and when engaged by the day, giving $1 to $1.25, and also their dinner. Negroes now-a-days are more slippery than they once were, and they are for the most part too much inclined to "pick up little things,"—potatoes, coal, &c. They do not regard this as stealing, when they take it to eat or to use in their families. He has never had a hand to violate his contract; they are made to understand that their situation is contingent on their good behavior.

In such expressions, however, the Club is by no means unanimous. Others represent the colored freedmen as unreliable and thievish, and insist that the legislature of the State should adopt some means to remedy the evils of which farmers complain.

We will close this article with some most encouraging and hopeful utterances of the editor of that excellent journal above-mentioned—the *Farmers' Home Journal*—and in doing so we take the liberty of printing them as our own sentiments:—

"Farming must be profitable in Kentucky or the number anxious to engage in it would be much smaller than it is, and our lands would not command the high price they always bring when they are offered. Farms sell for from $60 to $125 per acre, but $75 would, perhaps, be regarded as a fair average. Then everything that is raised, whether it be grain, live stock, or any other product, sells readily and at remunerative prices. The lands yield as largely as those in any other section, and horses, cattle and other animals cannot be more advantageously fed in any State. Home markets are always open, and dealers here are anxious to pay the highest rates, but if distant markets are preferred they can be easily reached.

"Just now the disorganization of our labor system renders farming more laborious and hazardous than it has ever been before, but even at this time it yields as fair a percentage as many other occupations, and despite the serious aggravating evils of which farmers justly complain, some of them have stated publicly that they are doing as well as they did when slavery existed. Energy, continued application, industry and thrift will work out profitable results now as well as they ever did.

"The passions and prejudices born during the fearful internecine struggle have been permitted to estrange the people of a common country too long. Let us strive to be forbearing, considerate and generous, and thus, while encouraging the nobler feelings of our nature, let us, whenever opportunity offers, work together to repair the ravages of the past. We are one people, and the prosperity of Georgia will be felt by its quickening influence in Kentucky and New York. When farmers, miners, manufacturers and machinists develop the vast resources of the South, its augmented wealth and power will benefit every other section. For a long time now the Southern people have been manfully struggling against accumulating misfortunes that would have utterly prostrated any other nation, but patient, industrious and enterprising, they have calmly waited their time, and now, soon they trust, they will be gladdened by the dawn of a more glorious prosperity than that which went down before the tide of war.

"The people of the South are now in a far better condition than they have been at any time since the commencement of the late disastrous struggle. The gratifying evidences of this improved condition will soon be manifest, in the quickening of business of all kinds, the removal of the sad traces of war and neglect, and the indications of enterprise and activity everywhere. In New Orleans, it is stated, that the people there confidently expect to do the largest business for many years. Already buyers from the South and Southwest are in the New York market making liberal purchases, to the extent of double the amount of last year."

—Fruit lands in the vicinity of St. Joseph and Benton Harbor, Mich., are sold at from three to five hundred dollars per acre, and some have been held as high as $1000.

For the New England Farmer.

BRAINS IN FARMING.---No. 3.

Mr. Editor:—Perhaps you and some of your readers will think that Uncle John is in danger of running *brains* into the ground. If so, I would just say, that there is no danger at all on that score. Indeed, that is the very thing I have been trying to do on my own farm, and in these articles.

I don't know whether Bradley's Superphosphate pays or not, never having tried it; but I do know that the *superphosphate of brains* pays bountifully. I have tried it on my twenty-acre farm, and the result has been, that I have doubled my crops. Could I get enough of this fertilizer, I could make farming a magnificent success.

But the trouble is, I am *short*, and this is an article not to be had in this market.

I have been looking round among our Vermont farmers some, to see what indications I could find of the practical use of *brains* in agricultural operations, and I discover some singular contrasts.

In the town of Richmond, in this county, there is a dairy farmer, E. D. Mason, Esq., who owns a fine farm on the Winooki River. He milks from seventy-five to one hundred cows. His milking yard is so located that all the wash therefrom runs down on to a hundred acre meadow, and enriches several acres to the highest degree. These are sowed to mangolds, carrots, and Western corn, which afford an immense amount of feed for his cows.

In another town is a fine farm,—I will not mention the owner's name,—with nice buildings; soil of the first rate quality, but the crops indicating that not one-fourth of its capabilities were developed. Passing along, on the lookout for indications that *brains* were used by this farmer, in the management of his farm, judge of my surprise, when I came in sight of his milking yards, in which I counted some thirty cows, to find it located on descending ground, where all the wash ran into a sloughhole by the road-side, and from thence into a small stream near by. Surely, thought I, brains must be at a discount with this farmer.

One of my neighbors has taken up Mr. Beecher's method of killing Canada thistles; that is, to cultivate them as a crop, and endeavor to make money out of them. He has a splendid crop. They show no signs of giving in, notwithstanding Mr. B.'s prediction that the rust would strike them, worms would gnaw them, bugs would bite them, &c., &c. My neighbor tells me that I may inform you that he will soon be ready to supply the trade with seed for another season, at a very reasonable price. So that all farmers who wish to cultivate this magnificent *posy*, can be accommodated.

In one of my communications to the Farmer, I spoke of the wasteful practice of stacking hay, which prevails through all this section. I have been expecting some of my neighbors would be down on me, with the exclamation:—"Physician, heal thyself," or, "O, consistency, thou art a jewel!" for I have been under the necessity of stacking some of my hay, this season. The fact is, Mr. Editor, that the application of *brains* to my land causes my crops to increase in undue proportion to the size of my barn, and if I keep my place, I shall have to apply a few *brains* in that direction.

It is a matter of no little surprise to me that these Vermont farmers, who are so sharp to discover a *dollar* whenever one turns up, *cannot*, or *do* not, notice the inconsistencies of some writers for the agricultural papers. They seem to take the thing very cooly, as if it were a mere matter of course. More anon.

Uncle John.

Charlotte, Chittenden Co., Vt., Oct. 5, 1869.

PREPARING FLOCKS FOR WINTER.

Selection. — The time has arrived for "drafting" flocks of sheep—*i. e.*, picking out those which it is not desirable to winter—where that process has not been already performed. The best time to do this was at shearing, when every fleece could be properly examined, but it is indispensable now. Under the present circumstances the selection should be rigorous, especially in flocks kept on the high-priced lands. Take out those old enough to be broken mouthed, the weakly young, every one known to be a poor breeder, every one defective in form, fleece or constitution. With fine wool at forty cents a pound, it will not pay to winter such sheep on the good lands of New York, Ohio, &c. It is better to sell them at the price of their pelts than to keep them.

Coupling.—Let no very old Merino ewes, and none younger than three, have lambs next spring. The stock rams should be as carefully selected as ever; for improvement is all the profit that can now be made on sheep in the old sheep growing regions of the Union. It costs no more to keep a good sheep than a poor one; the former produces more now, and it will be greatly more valuable when fine wool husbandry revives. (That it will revive, if the present wool and woolen tariff stands, we anticipate as confidently as we do that men will continue to wear woolen clothing.) It is a good time now again to commence treating stock rams more rationally than they have been treated for the last few years. Instead of enormously high keep, an enormous amount of work and close confinement, let us give them moderate keep, moderate work and their liberty.

Let us give our breeding ewes, too, such feed as will keep them hearty, plump and strong, but not fat, as a butcher would understand the word; and let us not only give

them liberty but require them, by some means or other, to take daily exercise, after they are brought into winter quarters. We do not entertain a shadow of doubt that the weakness of lambs at birth, their want of constitution, and many of their modern diseases, are in a great measure due to the pampering and close confinement of their sires and dams, the former during coupling and other portions of the season, the latter more especially during pregnancy. And we have just as little doubt that if the same causes are kept in operation from generation to generation, the stock so treated will gradually become permanently depreciated in the health and hardiness natural to the Merino race.

Winter Feed.—While we strenuously protest, as we always have done, against pampering, we recommend no high feeder to rush precipitately into the opposite extreme. As we have already said, keep the sheep plump and strong. But to accomplish this, sheep that have been habitually pampered require more and better feed than those which have been unused to high keeping. Two Arabs accustomed to the short fare of their deserts would subsist on an amount of nutriment on which a previously well fed Englishman would starve. Sheep, in like manner, become accommodated to circumstances; and the kind and even the amount of nutriment they demand is to a considerable extent regulated by habit.

We have seen healthy and thriving flocks of Merinos which were kept every winter on straw of all the kinds furnished on the farm, and a very moderate amount of grain. Sheep that have had a full supply of good hay with a liberal supply of grain, or grain and roots, would dwindle and run down on hay alone, or on straw with an equal amount of grain.

Fine, early cut and greenly cured hay, ought, so far as sustenance is concerned, to support any flock of grown up Merinos without any addition of grain or roots; though it would be better, so far as health is concerned, to exchange a portion of it for a nutritive equivalent in some kind of green feed, especially in the case of breeding ewes. The amount of such hay that a sheep will eat up clean we regard as the normal and most profitable measure of nutriment to supply it with when kept for breeding and growing wool. But it does not necessarily follow that it can be most profitably kept on this food exclusively.

Keeping Sheep in Show Condition.—This includes pampering usually, and housing from rain and snow in all cases. The object of the latter is well understood. It preserves the yolk in the wool, thus vastly increasing its "unwashed" weight; and it gives the dark exterior color to the sheep so highly prized by the two extremes—fancy breeders and greenhorns. It is of no utility to the wool. It probably does not increase its quantity or quality—at least to any sensible extent. It is of no benefit to the sheep. If kept up year after year, it must necessarily render them less capable of withstanding those exposures which all sheep must incur in the ordinary mode of treatment, and which ought to be innocuous to them. We desire to speak with all kindness on this head, for we know that a large proportion of the best breeders, and of the best men engaged in breeding sheep, countenance the practice. We know, moreover, that it is no more artificial and injurious than various fitting processes applied to other kinds of stock by breeders of character. Being known and avowed, it is no fraud. But what really sound and sensible reason can be given for it, and for incurring the trouble and expense of it, (no small items,) unless it is to enable one breeder to get the advantage of another who does not fit his sheep but who sells as good or better stock in every respect? —*Dr. Randall, in Rural New Yorker.*

THE WAY TO BLANKET HORSES.

But few persons comparatively understand how to apply a blanket to a horse to prevent him from contracting a cold. We frequently see the blanket folded double across the rump and part of the animal's back, leaving those parts of the body which need protection entirely exposed to the cold.

Those parts of the body of a horse which surround the lungs require the benefit of a blanket, in preference to the flanks and rump. When we are exposed to a current of cold air, to guard against any injury from contracting cold, we shield our shoulders, neck, chest and back. If these parts be protected, the lower part of the body will endure a degree of cold far more intense, without any injury to the body, than if the lungs were not kept warm with suitable covering. The same thing holds good in the protection of horses. The blanket should cover the neck, withers and shoulders, and brought around the breast and buttoned or buckled together as closely as a man buttons his overcoat when about to face a driving storm. Let the lungs of a horse be well protected with a heavy blanket and he will seldom contract a cold, even if the hindmost parts of his body are not covered. Many of our best teamsters protect the breasts of their horse by a piece of cloth about two feet square, hanging down from the lower end of the collar. This is an excellent practice in cold weather, as the most important part of the animal is constantly sheltered from the cold wind, especially when travelling toward a strong current. The forward end of horse blankets should be made as closely around the breast of a horse as our garments fit our bodies. Most horses take cold as readily as men, if not blanketed while standing, after exercising sufficiently to produce perspiration. So long as the horse is kept in motion, there is little danger of his suffering from cold; but allow him to stand for a few minutes, without

a blanket to protect his shoulders and lungs, and he will get cold sooner than men.—*Exchange.*

WHY THE PLACE WENT DOWN.

I was riding past a large farm a few days since in a public conveyance, when a man remarked, as he looked out, "This place seems to take to red sorrel the best of anything. I should rather have it in red clover."

Then followed some conversation between him and the driver with regard to the owner of the property. Once he was offered eight thousand dollars for it; now it would not bring half the money. The fences were all broken down, the boards of the barn were swinging in the wind, the old plows and wagons stood about unsheltered in the neglected barn-yard, and the house just opposite was in keeping with all the rest.

"The old man's sons mostly hang around the old place, but don't seem to do much towards keeping it up. They are a lazy lot. All three of 'em are at home now living off their father. How they live with their families I can't see. They never have anything to sell off their place."

One could readily believe that, when he took a survey of the broad fields, which should have been covered with waving grain, but which instead were red with sorrel. There sat the lazy young men looking out on the passers by, as if they had no other business in life. The old farmer smoked his pipe and saw his valuable place going to wreck and ruin, with the coolest indifference. The women of such a household were well deserving of pity, for on them fell the principal burden of making bricks without straw. In such a "sleepy hollow" atmosphere, the most energetic would feel a lethargy creep over the spirits, effectually checking all advancement.

Would you like to know the secret of such thriftlessness? It was a whiskey barrel in the cellar.

SALES OF STOCK.—John Dimon, Esq., of Pomfret, Conn, has sold to Henry C. Bowen, of the New York *Independent*, the thoroughbred Ayrshire cow "*Lida*," No. 547, American Herd Book.

Mr. Wm. Birnie, Springfield, Mass., has sold to H. L. Stewart, Middle Haddam, Conn., as we learn from the *Country Gentleman*, the two-year-old Ayrshire heifers *Nellie* (662,) *Susie* (789,) and *Hattie* (430.)

Mr. D. B. Fearing, Newport, R. I., has sold to H. G. Park, Long Island, his imported Jersey bull *Earl Jersey*; to L. P. Morton, heifer *Blueberry*, for $350; and to another buyer his cow *Fanny*.

The Toronto *Globe* says that of about sixty Leicester and Cotswold sheep offered at public sale nearly all were sold at $46 to $14 for rams; $40 to $10 for ram lambs; Cotswold ewes at $35 to $18 per pair; young Short-horn bulls, $100, and $95; heifers at $80, 61, and 51.

AGRICULTURAL ITEMS.

—Texas has more than 3,000,000 head of cattle, and can export, annually, 1,000,000 beeves.

—The average home production of wheat in England for the three past years is stated at 12,278,666, and the importation at 8,413,312 quarters.

—The farm in Yorktown, Va., upon which Lord Cornwallis surrendered his forces and signed the articles of capitulation, was recently sold for $8000.

—Twenty years ago Pennsylvania was the largest wheat-producing State in the Union—now it is about the twelfth on the list.

—A lot of Mestiza wool, of the clip of 1865 and 1866, was recently sold in New York at a reported loss of over 200,000, in the way of interest, insurance, commission, storage, difference in prices, &c.

—Mr. Charles Downing says that there is a raspberry in cultivation, which is being grown under the following different names: "McCormick, Miami, Large Miami, Collinsville Miami, Superior Miami, and Mammoth Cluster."

—Mast is unusually abundant in Mississippi this season. In Big Black Bottom, beech mast, acorns and hickory-nuts are very plentiful, and farmers will be able to fatten their pork with a small amount of corn.

—Good butter sells quick in Champaign Co., Ill., for 50, and ordinary at 35 to 40 cents per pound, probably at retail; and even at these prices its production is believed to be less profitable than raising and fattening cattle and sheep.

—J. H. Flickinger, of Santa Clara Valley, Cal., raised 200 tons of beets last year, which averaged twenty-five beets to the ton. There were many of them that exceeded one hundred pounds to the beet.

—A correspondent of the *Southern Cultivator* adduces many facts in support of the theory that rust is a disease as permanently fixed in some varieties of wheat, as the consumption is in some families. He classes the Tappahannock with the diseased varieties.

—The following is recommended by the *Southern Cultivator* as an excellent salve for wounds or or galls on horses and mules: Take one gill of tarpentine and one-half pound of tallow; melt the tallow and pour the turpentine with the tallow while hot; rub the animal's shoulder with it while it is warm, with a woolen rag, three times a day until it is cured.

—A correspondent of the Davenport, Ill., *Gazette*, put two hundred measured bushels of corn in a crib in November, 1868, which were recently marketed. The corn was kept in a well protected crib, and was in excellent condition when sold. It was found to have shrunk forty-eight bushels, equal to twenty-four per cent. discount from the original amount. There was no unusual exposure to rats, bad weather, &c.; the corn was first quality, and

he thinks the experiment was in all respects a fair test of the profit and loss of holding over.

—A correspondent of the *Country Gentleman* remarks that not within the memory of the oldest farmer have hills and plains been covered with such a sod as now. The long spring and fall rains of last year established the sod, notwithstanding the drought that intervened, and the present moist season, has given it the finishing touches. He advises farmers to take advantage of this fertility from the air by fall ploughing.

—To encourage wheat growing at home, and in the most profitable way, Mr. B. F. Griffin, of Hernando, Miss., says, in the *Southern Cultivator*, that the ordinary yield, by ordinary cultivation, in his county, is from three to seven bushels per acre, without manure. By deeper ploughing, better cultivation, and some manuring,—in one case at the rate of 100 bushels of cotton seed per acre,—crops were raised this season, within his knowledge, of 18, 20, 27, 29, and 31 bushels per acre.

—Mr. B. F. Cutter, of Pelham, N. H., has given us some curious observations in regard to crickets. His theory is that the singing of the "merry cricket" is governed very largely by the temperature of the weather, and that the change of one degree even, makes a corresponding change in its music. According to his experiments when the temperature is at 74° the cricket gives 154 "notes" in a minute; at 72°—145; at 70°—134; at 67°—120; at 63°—100; at 48°—10.

—The Vermont papers notice, recently, crops of 116 *heaping* bushel baskets of sound corn husked from a little over one acre of Gen. Blair's farm in Jay; J. Ervin Crane, Bridgewater, 3000 pounds of honey; Hon. H. S. Tallman, of Greensboro', measured up 132 bushels of wheat from four acres; George Kent, Calais, has harvested 250 bushels of Garnet Chili potatoes from three-fourths of an acre; J. L. Page, West Charleston, has raisd 5000 bushels of the same variety, at the rate of 400 bushels per acre.

—A correspondent of the *Gardener's Monthly* says that in the vicinity of Philadelphia, the Early Goodrich was very inferior last year, being pasty and almost unmarketable. This year it is much better. He planted Early Goodrich, Jackson White and Mercers, April 9th. The Goodrich ripened first, Jacksons second, and Mercer third; producing, as named, 3¾, 2½ and 3¼ bushels to an equal number of hills. In regard to quality the preference is given to the Goodrich this year, while last year they were inferior to either.

The Canada Thistle.—A correspondent of the *Rural World* who has recently visited England, was surprised to find this pest so common there that those who handled the grain had to wear sheepskin gloves. He says the Canada thistle is the great bug-bear of English grain fields; it has existed there from time immemorial, and seems likely to do so for all time to come. He says, "if English farmers, with their abundance of labor; with their skilful rotation of crops; their wheat fallows and their roots; the high culture of their land, that has been under the plough perhaps for ages—if they cannot eradicate this accursed thistle, I think it needs no stronger argument to urge upon American, and especially upon Western farmers the necessity of grappling with this intruder, and never to let it gain a foothold on our soil, if possible to prevent it."

Smut, Chess and Cockle.—Mr. S. B. Britt, Georgetown, Tenn., gives in the *Southern Cultivator* the particulars of an experiment by which he thinks he has discovered a preventive of all three of these pests. His seed wheat was badly adulterated with chess and cockle, and was also smutty. Not having patience to hand-pick his seed for thirty acres he concluded to run his chance with the cheat and the cockle; but to prevent smut he thought he would try a steep of one pound of blue vitriol in water enough for six bushels of seed. After steeping one mess about thirty-six hours, he found the cockle seed "rotten," and was satisfied it could not grow, and this led him to hope the steep might prove injurious to the cheat. His anticipations were verified at harvest, as not a sprig of either cockle or chess was seen in his wheat thus treated.

An Old-fashioned Farmer. — The style of farming to which New England is largely indebted for her prosperity,—a prosperity which has long been an enigma to the planters of the South,—is well illustrated by the following sketch furnished by a correspondent of the *Maine Farmer:*—

Col. Francis Hill, of Exeter, Me., a man now about 80 years old, took up wild land and commenced farming about 60 years ago. He lives on the same farm to-day, and in that time has never bought a pound of flour or meal of any kind, a kernel of corn or grain, a potato or apple, a pound of butter or cheese, of pork, beef or mutton, or any other nameable thing which farmers in Maine ordinarily produce from their farms. He has one of the best farms in his town, and works it yet himself; and was seen to-day guiding the plough and turning as straight and handsome a furrow as any young man in the land could do.

EXTRACTS AND REPLIES.

WOOL AND LAMB RAISING.

In an article of mine published in the Farmer of August 21, mention is made of the great number of fine wooled sheep feeding in the fields of Vermont farms. In my journey through Vermont to the State Fair, it appeared to me that there were not in sight of the railroad as many tens now, as there were hundreds of sheep last November.

I infer therefore that a very large proportion of the fine wool sheep of Vermont have been disposed of and large flocks reduced to suitable dimensions for raising wool in connection with market lambs. A glance at the Brighton market reports shows that the flocks have so far been reduced that the

sales are reported at one to two cents a pound higher than they were one year since, with the prospect that in one year more they will be two cents a pound higher than now.

One thing I think is clear to every discerning mind, and that is, that our supply of fine wool will hereafter be grown at the South and West in great measure. At the present prices of beef, pork, and the prospective prices of mutton, there is no business in which the farmers of New England can engage which promises more remunerative prices than the raising of wool and market lambs. The Chicago wool market report shows a falling off of 600,000 pounds of wool in one month from the corresponding month of last year. It does not therefore require a "prophet nor the son of a prophet" to show that the prices of wool must soon be higher, especially if we take into account the fact shown by reliable agricultural reports, that, in nearly all of the western and southern States the losses of sheep from grub, scab, foot-rot and other diseases, mostly arising from want of protection and want of care, are diminished flocks from ten to thirty-three per cent. The parts of flocks still remaining in the New England States are now in a condition to realize more clear money from raising wool and market lambs than they have been for many years past. Farmers who are wise enough to breed only to good strong thoroughbred bucks will see their account in it.

The Merinos, if well fed and housed in winter, so as to be at all times in really good condition, are good nurses, and when bred to full-blooded Cotswold bucks will sometimes produce lambs that will outgrow the full-bloods. Indeed I have sometimes known them to weigh more than a hundred pounds at seven months old, and sell for eight cents a pound live weight. Add to this the fleece, at say two dollars, which it will bring when the sheep is kept well enough to make the lamb weigh a hundred, and we have an income of ten dollars a year for the keep and care of a sheep. For rearing market lambs, there is probably no sheep better adapted than the first cross of the Cotswolds on the Merino; none that will prove more prolific and thrifty. T. L. HART.

West Cornwall, Conn., Oct., 1869.

CURING HAY.—FANCY PRICES OF NEW THINGS.

I cannot well get along without the FARMER, notwithstanding some of the writings therein have produced in me a diseased state of mind and purse, commonly known by the name of restlessness and emptiness. For instance, the Metcalf half-dried, salted-and-limed hay theory affected me badly, as it did also my cattle, which probably might have died, if I had not had a large supply of early-cut, nicely-cured, sun-dried hay, which I administered freely as a medicine, with most encouraging results. Good early cut hay is, in my opinion, the great panacea for horned cattle and horses; and will not kill sheep when given in proper doses. No farmer should be without it summer or winter. I next came down with the potato fever. It run high. Drs. Early Goodrich, Sebec and Rose prescribed for me until I was salivated. Age and constitution saved me, no doubt; for having dismissed my physicians I entirely recovered.

I am naturally somewhat given to experimenting. I like to read all that I can find time to, of what is written upon the subject of agriculture. Still, I do not feel that I am bound to test, by practice, all the new-fangled doctrines advanced by those whose pecuniary object is as obvious as in case of the advertising, puffing and selling Early Rose and other potatoes at $3.00 per pound, or $180 per bushel; or Norway and other oats at similar prices. No sir, not I. For I have yet to learn that we farmers can all live and prosper by puffing and blowing for any, or all, the different varieties of vegetables, grains and animals, without a slight sprinkling of manual labor, tinctured with economy, sobriety, and at least a coloring of honesty. C. N.

Marlborough, N. H., Oct. 4, 1869.

MILESTONES AND GUIDE BOARDS.

Every day some of us are asked the distance or the direction to such and such a place, and of course we give the desired information as accurately as we can. But why need a stranger be put to this trouble of stopping every now and then by the way, and hailing some man or boy in regard to the distance he has got to travel? Milestones, that poets tells us of on "the journey of life," are as real as those which the bewildered traveller searches for in vain on many of our highways. Indeed such guides are so scarce that when one is visible, many passers-by wonder what that stone stands there for, and some even inquire Who was buried there? And what few are to be seen at long intervals by the roadside, are mostly old relics, partly covered with lichen, and are as illegible from age as headstones in an ancient graveyard. In front of my house stands one of these venerable specimens, half sank in the earth, but serving as a convenient place to stick handbills.

When traveling by rail, milestones all run together, and, besides, the conductor's check renders them superfluous, as a table of distances is usually found on its back, very convenient for reference by passengers as they are whirled from point to point. But when we are journeying with our own teams, it is a matter of personal convenience to man and beast to mark each successive mile. No wager may be pending on the speed made, as when fast horses go the round of the "mile track;" but a considerable amount of personal comfort and enjoyment is. How often are individuals puzzled in their own native village to tell a new comer the distance from this and that house to another farther on, or from one district to another on the same street; or just how far it is to the church and post office? We have an impression that it is a mile, or some fraction of one, from one point to another, and that the main street is just about so long; but what visible, tangible means have we at hand for verifying our impressions? Even the road surveyor is very apt to proceed in this vague way, and take it for granted that nobody expects an exact calculation of distance. Now regular milestones may not be as essential to peace and harmony as are bound-stones, but if established at regular intervals along our highways, they would save a deal of breath and uncomfortable suspense. Why not have public measures of distance as well as of time?

Guide boards are tolerably frequent in every well regulated neighborhood, but sometimes this very fact is the cause of bewilderment. For example, you travel intelligently under their guidance to a certain fork in the road, where you miss the accustomed sign, and are the more confused from having thus far depended upon them. You wonder why one should be missing now, and your only alternative is to venture ahead, till you overtake somebody, or arrive at some house where you can obtain the needed information. It may be a mile or two; and then, perhaps, your weary horse must be turned back on his hard journey, till the right road is struck at last. Sometimes the guide-post is flanked with as many boards as there are points of the compass, and enlightens you considerably on the geography of the whole region. You proceed with full assurance till all of a sudden you come to a halt before a naked post, or a faded dilapidated sign, better off than on. Then you wonder why the fathers of the town did not

indicate the way here as well as elsewhere. Did their funds give out just here, or didn't they think this "fork" worth noticing, or did they take it for granted that everybody knew the road as well as they?

Some old guide-boards are suffered to remain just where they were nailed in the days of turnpikes and staging, from capital to capital, just as though railroads and telegraphs were not in operation. They are pleasant reminders of the good old times, and call up many ghosts of departed wayfarers and teams; but they fail to divert the rushing tide of travel back into the old ways.

The editor of *Our Dumb Animals* pleads for more guide-boards, from recent experience in driving over roads with which he was unacquainted in Massachusetts, New Hampshire, &c. Let me add my humble plea, after a recent drive over certain strange roads in Connecticut. Let me also here return thanks to sundry men, women and children, who supplied the deficiency as well as they could by intelligent answers to a perplexed and bewildered stranger's appeals, in the pursuit of knowledge under difficulties. W. B. D.

Longmeadow, Mass, 1869.

OIL AND COTTON SEED MEAL.

Can you give me some information concerning the qualities and value of oil meal and cotton seed meal?—what kind of stock they are suitable for, how fed, value as compared with corn meal, &c.

There seems to be a strong prejudice among our old farmers against oil meal. They say it injures the flavor of butter and makes the milk unhealthy.

Oct. 6, 1869. D.

REMARKS.—In small quantities, oil, cotton or Indian corn meal are excellent for milch cows or working or fattening oxen. A quart of either, each day, for an animal, would probably never harm it. Butter made from cows so fed would not, we think, be flavored with oil or cotton seed meal. We should prefer to have hay cut and the meal mixed with it, to feeding the meal alone. As prices range, they indicate that oil meal and cotton seed meal are more nutritious than corn meal. They probably are so. Milk producers want to get all the milk they can from their cows, and some of them feed two, three, or four quarts a day of meal to each cow. It produces a large flow of milk for a time, but is highly injurious to the health of the cow, producing abortion and shortening the life of the animal.

EARLY ROSE IN NORTHERN VERMONT.

We admire the straightforward, fearless manner in which the FARMER exposes humbugs, and guards the public against error and imposition. But we did feel just a little as if it was over zealous last spring when, in common with all who had not proved this variety, it spoke quite disparagingly of its quality.

In regard to the table quality of the Early Rose there is only one opinion *now*, in this section. Our best houses offer twice the price of ordinary varieties for them, but they will be mostly saved for seed.

Among the scores of reported crops, we have had only a single complaint: One man told me that his pound raised only 34 pounds. The majority have ranged from 80 to 100 fold, from small quantities of seed. I have grown the Rose this season with the Excelsior, Western Chief, Philbrick's Early, Brazee's Prolific, and other new varieties. In productiveness, they are equalled only by the "Prolific," which exceeds it. Mr. Amos Robinson of Swanton, Vt., a gentleman of well known veracity, makes the following statement in the St. Albans *Messenger*:—"From three Early Rose potatoes, which weighed one pound, he this year raised 359 pounds, which is within one pound of *six bushels*. Had he not dug a few for trial, this one pound would have been more than made up. Thirty-one of the potatoes weighed 41 pounds 7 ounces. The land on which the crop was raised had not been manured this year.

West Georgia, Vt., Oct. 1, 1869. O. C. WAIT.

NORWAY OATS.

I have some oats of which I was quite boastful when your first account of a heavy yield came, as mine had more than twice as many grains in a head as those you described. But more recent statements have so completely eclipsed mine, that I now simply enclose to you two or three heads, to ask whether they are the "Norway" or not.

BOARDMAN F. STAFFORD.

South Wallingford, Vt., Oct. 1869.

REMARKS.—On comparison, we think yours are the same as those which have been sent by others as specimens of the Norway.

Having read the statements about Norway oats, I thought I would see what I could find in my own field, which I thought could not be beat. First I pulled up a stool with eight stalks from one seed, producing 1511 grains. Then I found another bunch of 13 stalks and 1762 grains. Afterwards a stool of 17 stalks, but have not counted the grains. These oats were sown on pasture land after two crops of potatoes with *no* manure.

CHAS. E. MCINTIRE.

Lancaster, N. H., Oct., 1869.

REMARKS.—That must be good land. After such a cropping, will it produce grass that will fatten stock? The failure of our New England pastures is a subject that has been considerably discussed of late. Please give us your views as to the proper management of this important part of our farms.

FALL CROPS IN NEW HAMPSHIRE.

One year ago to-day snow fell to the depth of three inches in this town. Now we have grape vines, beans, &c., untouched by frost, late planted fodder corn, vines, &c., as green as in July, and large quantities of tomatoes as fresh as those that first ripened. This is remarkable for New Hampshire. After all our fears our corn crop is good, some farmers say they never had better.

Concord, N. H., Oct. 18, 1869. N. P. RINES.

MUCK, LIME, AND SALT.

Can salt or lime be economically used with muck?

What is the best way of managing a meadow once reclaimed and drained, but by neglect suffered to revert to water grasses, hassocks, &c. Can it be done without ploughing? P.

REMARKS.—Where lime or salt can be procured at moderate cost—as they sometimes can in a partially damaged state—we think they may be economically employed. That lime, salt and muck, well mingled, will have an excellent effect upon most lands, we have no doubt.

We see no other way of reclaiming a *backsliding* meadow than to treat it as it was treated origin-

ally: drain, plow, plant and hoe the crop thoroughly. If it has not grown up to bushes, perhaps draining, ploughing and pulverizing the surface may fit it for sowing grass seed. In such case it should be dressed with fine manure, which should be harrowed in with the seed.

A CRIPPLED SOLDIER.—POTATO RAISING.

Being lame and feeble from injuries received during my service in the late war, I wish to ask your advice as to what I had best undertake to do. I have bought ten acres of worn-out land, with miserable old buildings, on a road full of rocks, logs and mud-holes, in a neighborhood where farms are fast going to pasture, and five miles from any store, &c. I have an old orchard, a fair meadow, with water in yard. Stock being high, I raised all the calves I could, worked out in the summer, battened up the barn, and potatoed my young stock through the winter, to find that prices have gone down.

For two years I planted the Long Red potatoes on such miserable plain land that a skunk would feel faint to cross it, and with a little plaster but no manure got glorious crops. This year I thought I would go in for improvement, so bought some Sebecs, Early Goodrich and Harrisons, put a good shovelful of manure in the hill and—well I have bought potatoes and must keep doing so the rest of the season! A few of the Long Reds were accidentally planted or sprung up from seed in the ground or with the manure, and they were whoppers! Would like to read an article addressed to A SCRUBBER OF BUSH AND BRIER.

Hillsboro' Centre, N. H., Oct. 20, 1869.

REMARKS.—Would that it was in our power to aid you by advice or otherwise; but as your letter clearly shows that you are "a live man," notwithstanding all the battering you got in the service, we conclude that you understand your circumstances better than we do, and we judge that you will be pretty safe if you follow the leading of your own best judgment. We have little faith in poor land, or "miserable old buildings," and we mistrust that you have put "the worst side out," and that your ten acres will soon justify a more favorable description. True, stock is lower now than when at the highest, but so also are many things that you have to buy. Perhaps you will be pleased with an article in another column, on potato raising. We are trying hard to make a paper that shall interest the "scrubbers of bush and brier," as well as the cultivators of smooth fields and rich farms, and most heartily endorse your request for articles calculated to interest and benefit those who, like yourself, are endeavoring to restore the run out soil of New England, even on a small scale. Let us hear from you, again.

LAMBKILL OR LAUREL POISONING.

I have been informed by Mr. Nathan Corey of Washington, N. H, that the white of an egg is a sure antidote for Lambkill poison. It will give relief when a sheep is so far gone that it cannot stand. If one egg is not sufficient, give it two or three.

A GOOD HARROW.

Ayers' harrow is the best implement to pulverize the soil after it has been broken or turned by the plough or to cover grain, that I nave yet seen. It is next to a plough to cover manure.

Another having taken, without leave, my incog, I will subscribe myself HOLLIS TOWNE.

A CURE FOR GAPES IN CHICKENS.

Double a long stiff horsehair, so as to make a bow or small loop in the middle; hold the chicken with its bill open; introduce the loop of the hair into the windpipe, and push it down as far as it will go, turn it around a few times and draw it out. You will probably bring out some small, bright red worms, from half an inch to two inches long. Repeat the operation until the worms are all out and your chicken is cured. C. S.

Stoughton, Mass., Aug. 26, 1869.

For the New England Farmer.

A LITTLE DRAINAGE OPERATION.

BY JUDGE FRENCH.

MR. BROWN,—Dear Sir:—I willingly comply with your request to describe the little drainage operations upon my farm in Concord. I have both preached and practiced draining land for twenty years and more, and I still find that farmers are very slow to follow my good example. There are several farms close by me where the whole cost of draining some portions of them would be repaid by the increased product in two seasons, yet for want of faith or knowledge, the owners neglect to make the improvement, and year after year lose their crops, or work the soil at great disadvantage.

The Plan of Operations.

I bought my farm in the spring of 1867. It has been under cultivation two hundred years and more. The field of which I shall speak is the one nearest the house and barn, and next the street. In it is a low place, of about a half acre, which had always in autumn furnished a skating pond for the children. It is a basin, filled by heavy rains with surface water, with no outlet, and from which the water slowly passed off by percolation through the soil, leaving it dry in summer, so that it has been occasionally ploughed, and sowed to grass, producing a fair crop for a year or two, and then going back into wild grass and hassocks,—the condition in which I found it. In the spring of 1867 I ploughed across one side of it, and when I planted my fodder corn on the 4th of June, it was too wet to plant, and I left it untilled through the season. This piece we will call the pond-hole. In the same field, near my neighbor's line, is a level tract of one acre or more, which produced very little, upon which the water ponded late in the spring, and which had not been ploughed for some sixteen years or more. Under this, I found by digging test-holes, that there was a soft blue clay at the depth of two or three feet. On my neighbor's field was a similar tract of one or two acres, at the same level, adjoining mine. He or his ancestors had attempted some surface drainage, through a

bank to the street, but with no permanent advantage.

Having had a careful survey of my farm, including the contour, I found that the best outfall for my drainage would be 750 feet through my neighbor's land, on a brook leading to Concord river, and that in the whole distance on his and my own land, in all about 1200 feet, I had but 7½ feet fall from my pond-hole. Starting the drains at 3½ feet deep, I had four feet fall, or an average of four inches to the 100 feet. Finding by digging a test-hole that we came into flowing sand and water at the deepest point, I concluded to lay the tiles to that point with a descent of three inches to 100 feet, making the drain 6½ feet deep there, and give an increased fall beyond, which would much increase the capacity of the tiles to carry water, without increasing the size. The greater the fall, the more water the pipe will carry, and as we had 4-inch tiles for the whole 750 feet, and they would be laid low enough to take in water most of the way, this was an important consideration.

The Process.

We begin to lay tiles at the upper end of a drain, because if we begin at the lower end there is danger of their filling with the deposits from the muddy water which flows through them. But to do this, we usually open the drain the whole length, otherwise the water cannot run off. Knowing that if we did so, the banks would cave in and stop our work, I adopted a different course. We first opened the 750 foot drain to the depth of about three feet, which was as deep as we felt safe against their falling in. Then at the upper end on our boundary line, we dug and stoned up a well about five feet deep and three feet in diameter, the water rising in it to within a foot of the natural surface. Then we opened our drain to its full depth for three or four rods, and while one man with a bucket dipped up the water into a trough, which carried it forward into the partially opened ditch, we laid our 4-inch tiles in place, putting a strip of tarred paper over the upper part of the joint, and partly filling the ditch as we proceeded.

When we reached the greatest depth, which was 6½ feet, our troubles were many, and we had a hard fight for some days. Although October was as dry as any part of the season of 1868, we had a foot or more of water in our drain whenever we ceased to throw it out, and the sand seemed as fluid as the water. We put in plank curbing with braces to sustain the upper part of the bank, and tried various expedients to keep the sand from running in at the bottom. We finally discovered that by thrusting down wide shingles, edge to edge, on each side at the bottom of the drain, we could get three or four tiles at a time into position. The banks, however, caved in occasionally by cartloads, stopping our whole work, so that on our worst day, with five men, we got in but *three tiles!* That was a bitter cold day with a snow storm, the 17th of October. We resolved, however, to fight it out on that line, if it took all winter. In three days more we got through the worst, and opened the lower end so that the water ran off of itself, and on the 22d we laid the last tile in the main ditch.

The cost of that drain was as follows: 750 4-inch tiles and freight $51.75; copper screens for outlets, tarred paper and lumber $3 90. Labor, excavating, filling, fixing well and outlet, fifty days, $75.00, making in all $130.05, of which my neighbor contribued one-half.

Thus far I had gained only an outlet for my drains, as the main drain was all on my neighbor's land.

Then we opened a drain from the well to the pond-hole, going, at the deepest, about 4½ feet, in very soft clayey subsoil. Through the pond-hole and well up into the sloping sides of it, we laid drains with 2-inch tiles, fifty feet apart, from 2½ to four feet deep, as the surface varied, and connected them with the drain leading to the well, which was laid with 3-inch tiles. We also laid other 2-inch drains near the division line, and completed the whole by November 16.

The well is covered with a platform, which opens so that we may see what is going on. Three drains pour into it, and the main drain flows out, and after a heavy rain it is a pretty sight to see.

The ends of the tiles in the well are covered with copper netting, to keep out frogs and mice, and anything that might obstruct. Sometimes the main runs full and the water rises two or three feet above it, but only for a few hours. Such an opening is well worth having; in a system of drainage, to catch any silt that may come from the drains above, to enable us to inspect our work, and to show doubtful neighbors what a lively time the water is having underground, when all is so dry and quiet above.

The Result.

The pond hole which had been ploughed and seeded to grass in a dry time in August last year, bore this year the heaviest crop of herdsgrass on the farm, and a good second crop, and is now covered with a good growth of clover. The spot which was too wet to plant with fodder corn last year, in June, was set with asparagus the past spring, and is dry enough for any crop. The flat portion near the division line and well, where water generally stood all the spring, was ploughed on the 7th and 8th of May from ten to twelve inches deep with four horses and a Michigan double-plough, and with ordinary manuring has produced good crops of carrots, Swedes, Mangolds and potatoes. The Mangolds on half an acre yield at the rate of twenty tons to the acre, and the carrots and Swedes not yet harvested are as good in proportion, which is satisfactory for such crops on a heavy sod turned so

deep at one operation. I think the two acres affected by the drainage near the line will prove the best market garden land on the farm. It is now, in the middle of October, after heavy rains, fit to plough at any hour. The wet places which were before obstacles in the way of regular work in my most convenient field, may be worked with the rest and no longer deform the landscape.

My neighbor has not yet ploughed his field, but is well satisfied with what is done. Possibly, having seen his land afloat every spring and fall of his life, he would not have had the faith to plant it with root crops till he had watched mine over the fence one season.

I am satisfied that in no way whatever could I have expended the same amount upon my farm so profitably as in this operation.

Concord, Mass., Oct. 20, 1869.

WINTERING BEES.

This subject was discussed at a late meeting of the Michigan Bee-keepers' Association. Jas. M. Marvin of St. Charles, Illinois, as reported in the *Prairie Farmer*, said, I keep from 200 to 500 hives every winter, and for the past twenty years have kept them in cellars made dry and warm. I would not advise bee-keepers to keep their little friends out of doors, subject to the storms and winds. I prepare the hives by equalizing their honey, and leaving the slats open in the honey-board. The hives are placed in rows around the cellar; two, three, and sometimes four tiers deep. If there is plenty of room, I would place the lower tier of hives about two feet above the bottom of the repository.

Cellars having sandy and gravelly foundations would generally be dry and suitable places. Attention should be paid to the temperature, to keep it as near as possible between 35° and 45°. If below 35° they will be too cold, and if above 45° they will be so warm as to get uneasy and leave the hives.

The President made it a rule to weigh his hives and if any fell short of the proper amount, he supplied them with combs of honey from those having too much. In answer to a question, the President said he wanted the combs, bees and honey to weigh not less than thirty-five pounds. Twenty-five pounds of *honey* would winter a hive of bees safely.

Mr. C. I. Balch, of Kalamazoo, has a large house cellar dug out of a bed of sand and gravel. The sides are laid up in stone of all shapes and sizes, and left rough. There is no floor, simply a loose gravel bottom. In one corner is a large cistern, the top being about a foot from the floor of the room above, and is left entirely open. The water being thus exposed, purifies the atmosphere, both summer and winter, and keeps the temperature uniform. From ten to fifty hives are put into this cellar every winter. None have been lost till last winter. A few young swarms were then lost, which was mainly owing to *bad honey*.

HOW TO UNHITCH A TEAM.

There is always a right way to do everything, and the right way to unhitch a team is that which is quickest and safest. We have often noticed farm boys, and not only farm boys but men, disconnect a team from a wagon in a very unsafe manner, something as follows:—

The driver springs from the wagon, goes to the sides of the horses, puts up the lines, unbuckles them at the bits, lets down the neck-yoke, unhitches the tugs and leads the horses away disconnected.

Now this mode is very common, and very risky. Let us notice why. In the first place, as soon as the lines are put up you have lost your means of control, as soon as the pole is down your horses are in peril. Supposing they should take fright, which is common to the most quiet animals, the result of a team running with only the tugs hitched can be imagined. We have cases in mind where horses have sped away with maddened fury in exactly this condition, the pole ploughing the ground, and at every plunge of the frenzied animals, the wagon striking their heels, frightening them to perfect desperation.

Now the right way, or a good way at least, is to keep the lines in hands or where they can be reached until the tugs are *all* unhitched, then your team is free from the wagon unless a stationary neck-yoke is used, next go directly in front of the horses and let down the neck-yoke, and after this separate them as convenient.—*Ohio Farmer.*